RETURN TO DEPT. 854
TEST CONSTRUCTION
1 of 2

OPERATION AND MAINTENANCE MANUAL

360 FREQUENCY SYNTHESIZER

360D11 MAINFRAME AND 3600E1 FREQUENCY EXTENDER

REVISION A

AILTECH
A CUTLER-HAMMER COMPANY
2070 FIFTH AVENUE • RONKONKOMA, NEW YORK 11779

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WARRANTY

Except for tubes, fuses, and batteries which carry no warranty, Cutler-Hammer, in connection with equipment sold, agrees to correct any defect in workmanship or material which may develop during the period of one year from the date of shipment under proper or normal use and not in excess of the original manufacturer's life expectancy ratings, by its option to repair or replace, FOB point of shipment, the defective part or parts, and such correction shall constitute a fulfillment of all Cutler-Hammer liabilities in respect to said apparatus.

April 1978

FOREWORD

The AILTECH 360 Frequency Synthesizer manual is a complete handbook consisting of operation and maintenance of the 360D11 Mainframe and 3600E1 Frequency Extender.

The AILTECH 360 Frequency Synthesizer manual contains general information relating to the operational characteristics of the instrument and information required to service and maintain the instrument. Included are schematics, troubleshooting procedures, and replaceable parts list.

ADDITIONAL SERVICE

Additional service information can be made available by calling AILTECH.

NEW YORK	516-588-3600
CALIFORNIA	213-965-4911

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AILTECH 360D11 Mainframe

CHAPTER 1

GENERAL INFORMATION

1-1. INTRODUCTION

1-2. The AILTECH 360D11 Mainframe and 3600E1 Frequency Extender are used with the P360 Series RF Sections and PM3600 Series Modulation Sections. When fully assembled, these items make up a Frequency Synthesizer whose frequency range depends upon the RF Section installed with modulation capabilities determined by the particular modulation section in use. Table 1-1 lists the available RF and modulation sections and their capabilities.

1-3. This manual contains installation, operation, and maintenance information for the AILTECH 360D11 Mainframe and the 3600E1 Frequency Extender. It is divided into five chapters as follows:

a. Chapter 1, GENERAL INFORMATION, provides brief physical and functional descriptions of the mainframe and frequency extender, pertinent specifications, a list of component subassemblies, and a list of test equipment required for maintenance.

b. Chapter 2, INSTALLATION, provides information necessary for unpacking, setup, and initial checkout.

c. Chapter 3, OPERATION, provides information on how to operate the mainframe and frequency extender in conjunction with the RF section and modulation section to obtain desired output. It also contains simple maintenance procedures for a user to follow should the equipment appear to malfunction.

d. Chapter 4, MAINTENANCE, provides all information necessary to troubleshoot, repair, and adjust the mainframe and frequency extender.

e. Chapter 5, REPLACEABLE PARTS LIST, provides a complete list of all parts contained in the mainframe and the frequency extender.

1-4. DESCRIPTION

1-5. MAINFRAME

1-6. The AILTECH Type 360D11 Mainframe, shown in the frontispiece, accepts the 3600E1 Frequency Extender and/or various RF sections to provide synthesized signals. The basic unit measures 7-inches high, 16-3/4 inches wide, 22-3/8 inches deep, and

weighs 48 pounds. It produces frequencies in the range of 35 to 35.9999999 MHz in steps of 1 Hz or in steps of 0.1 Hz when the -001 option is provided. Specifications for the 360D11 mainframe are listed in Table 1-2.

1-7. All mainframe frequencies are derived from a reference input. The reference can be an externally applied 5 or 10 MHz signal, or from an optional, internal, 10-MHz crystal-controlled, oven-stabilized signal source. Two internal options (-002 and -003) are available. (Refer to paragraph 1-14.)

1-8. Frequency control of mainframe and frequency extender, and subsequently, the overall synthesizer output frequency, is either by reversible push-type thumbswitches on the mainframe front panel or via a remote control input on the RF section. (See RF section instruction manual for details on remote control requirements.) The only other operator controls are the LINE ON-STDBY and LOCAL-REMOTE toggle switches.

1-9. FREQUENCY EXTENDER

1-10. The 3600E1 Frequency Extender consists of five modules installed in the lower deck of the mainframe. The unit extends the 35- to 36-MHz output of the mainframe to a 10-MHz increment covering 30 to 40 MHz. The 1-MHz frequency increments are added in the process.

1-11. The frequency extender occupies the entire lower deck of the mainframe and adds 15 pounds to the mainframe weight. There are no operator controls or external connections on the frequency extender.

TABLE 1-1

AVAILABLE RF AND MODULATION SECTIONS

Model	Description
P360180E1 RF Section	10 kHz to 180 MHz
P3601.8E1 RF Section	1 MHz to 1800 MHz
PM3601 Modulation Section	External AM
PM3602 Modulation Section	Programmable, internal or external, AM, FM, and PM.

TABLE 1-2

MAINFRAME SPECIFICATIONS

Parameter	Specification
Frequency Selection	Eleven digits selected by pushbutton or remotely programmable via RF section rear panel connector.
Frequency Resolution	Dependent upon RF section installed. Standard is 1 Hz; Optional is 0.1 Hz.
Reference Oscillator	Internal: See options External: 5 or 10 MHz, 0 dBm, 50 ohms, BNC rear panel input.
Reference Output	Rear panel BNC connector provides 10 MHz reference output at +3 dBm nominal, 50 ohms.
Display	Frequency selection pushbuttons provide mechanical display of frequency.
Operating Temperature Range	0 to 55°C.
Power	115 or 230 volts, ±10%, 48 to 66 Hz, approximately 130 watts including typical RF Section, frequency extender, and modulation section.
Size	16-3/4 inches wide x 7 inches high x 22-3/8 inches deep (426 x 178 x 568 mm).
Weight	Mainframe only Net: 48 lbs (21.6 kg) Shipped: 60 lbs (27.3 kg)

1-12. The frequency extender must be installed in a 360D11 Mainframe when the part number of the RF section in use includes the letter "E" or "T" in the last three digits. It can be left in place at the user's option when other P360 RF sections are used.

1-13. The frequency extender and its location in relation to the mainframe is illustrated in Figure 1-1. Specifications are listed in Table 1-3.

1-14. OPTIONS

1-15. Seven options are available with the frequency synthesizer: 001 through 005 are described below. 006 and 007 are described in paragraphs 2-16 to 2-18.

- Option 001 adds one additional decade to the mainframe, improving the basic mainframe/frequency extender resolution to 0.1 Hz. Actual output resolution of the complete synthesizer is dependent upon the RF section installed.
- Option 002 provides an internal 10-MHz reference signal, crystal-controlled and oven-stabilized with an aging rate of $\pm 3 \times 10^{-8}$/24 hr (after 72 hours warm-up).
- Option 003 provides an internal 10-MHz reference signal, crystal-controlled and oven-stabilized with an aging rate of $\pm 1 \times 10^{-9}$/24 hr (after 72 hours warm-up).
- Option 004 provides for operation from a 50- to 400-Hz ac line frequency.
- Option 005 provides remote operation via GP1B according to 1EEE Standard 488-1975.

1-16. ACCESSORIES

1-17. A Service Kit (P/N 299252) is available for maintenance purposes. Table 1-4 lists the items contained in the kit. The items marked with an asterisk are applicable to the mainframe/frequency extender combination.

1-18. TEST EQUIPMENT

1-19. Table 1-5 lists the test equipment recommended for use in testing, adjusting, and servicing the mainframe and frequency extender.

1-20. MAINFRAME SUBASSEMBLIES

1-21. The mainframe consists of eight major assemblies. Table 1-6 lists the names, reference designation, and part number of each assembly.

1-22. FREQUENCY EXTENDER SUBASSEMBLIES

1-23. The frequency extender consists of five major assemblies. Table 1-7 lists the name, reference designation, and part number of each assembly.

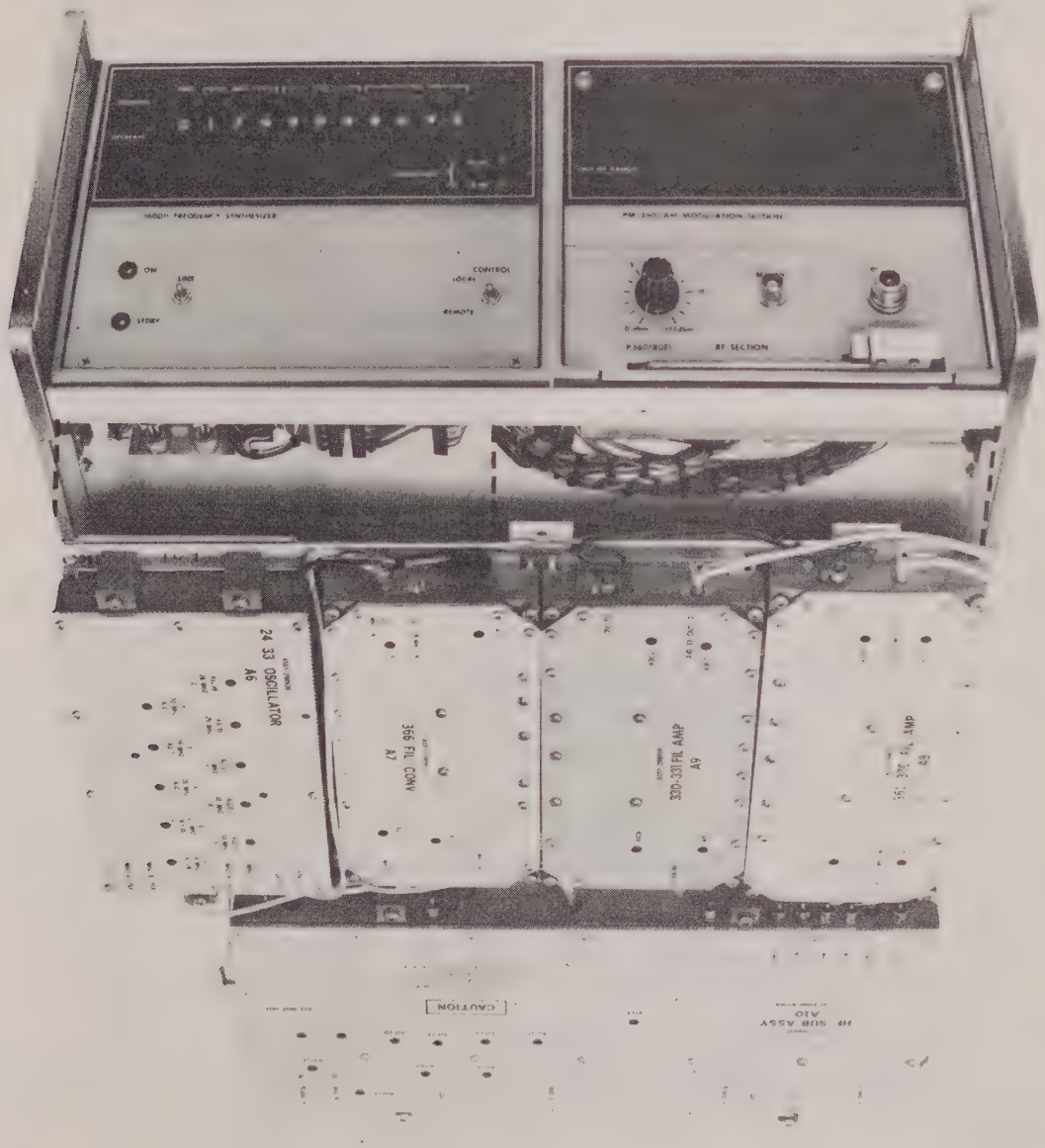


Figure 1-1. Frequency Extender Installed in Mainframe

TABLE 1-3

FREQUENCY EXTENDER SPECIFICATIONS

Parameter	Specification
Size	Module to fit the 360D11 Mainframe
Weight	Frequency Extender only
	Net 15 lbs (6, 8 kg)
	Shipped 18 lbs (8, 2 kg)

TABLE 1-4

SERVICE KIT ITEMS

Item	Description	Mfr	Part Number
1	Cable Assembly, Extender, RF Section	AILTECH	299822
2*	Cable Assembly, Jumper, Mainframe	AILTECH	299821
3	Cable Assembly, Extender, Modulation	AILTECH	299820
4* (2 each)	Cable Assembly, Coaxial, SMB Plug to SMB Plug	AILTECH	299543-1
5* (2 each)	Cable Assembly, Coaxial, SMB Plug to SMB Plug	AILTECH	299543-2
6*	Cable Assembly, Coaxial, SMB Right Angle Plug to SMB Right Angle Plug	AILTECH	299543-3
7*	Cable Assembly, Coaxial, SMB Plug to BNC Plug	AILTECH	299543-4
8*	Adapter, BNC Female to SMB Jack	Sealectro	51-075-6801
9*	Adapter, BNC Female to SMB Plug	Sealectro	51-077-6801
10*	Adapter, SMB "T"	Sealectro	51-085-0000
11*	Card, Jumper, BCD	AILTECH	299225
12*	Card, Extender, BCD	AILTECH	299545
13*	Card, Extender, Power Supply	AILTECH	299547
14*	Tool, Adjustment	Micrometal	Tuning Tool "A"

*Specifically required for mainframe/frequency extender maintenance.

TABLE 1-5

RECOMMENDED TEST EQUIPMENT

Item	Specification	Recommended Model
Spectrum Analyzer	0.001 to 12.4 GHz, 100 dB display range with pre-selection and variable persistence	AILTECH 70711-001
Frequency Counter	300 Hz to 180 MHz	Dana 7720
RF Power Meter	200 kHz to 200 MHz, ±0.2 dB	Boonton 42B
Prescaler	600 MHz, ÷ 10, ÷ 100	Weston 1259
Service Kit	See Table 1-4	AILTECH 299252

TABLE 1-6

MAINFRAME ASSEMBLIES AND SUBASSEMBLIES

Reference Designation	Title	Part Number
A1	Front Panel Assembly	298931
A1A1	Frequency Select Switch Motherboard	299202
A2	Lower Order BCD Assembly	298933
A2A1	1 kHz BCD Decade Board	299204
A2A2-A2A4	1 Hz to 100 Hz BCD Decade Boards	299214
A2A5	0.1 Hz BCD Decade Board	299214 (1)
A2A6	BCD Interconnecting Board	299203
A2A5	Jumper Board	299225 (2)
A4	Higher Order BCD Assembly	298934
A4A1	100 kHz BCD-1 Board	298904
A4A2	100 kHz BCD-2 Board	298905
A4A3	100 kHz BCD-4 Board	298906
A4A4	100 kHz BCD-8/1 Board	298907

TABLE 1-6

MAINFRAME ASSEMBLIES AND SUBASSEMBLIES (cont)

Reference Designation	Title	Part Number
A4A5	100 kHz BCD-8/2 Board	298908
A4A6	Buffer Amp Board	298909
A4A7-A10	64/65 MHz Switch Board	298910
A4A11	10 kHz BCD Board	298248
A5	Fixed Frequency Generator Assembly	298935
A5A1	Input Board	298921
A5A2	10 MHz Output Board	298918
A5A3	60 MHz Generator Board	298919
A5A4	65 MHz Generator Board	298917
A5A5	64 MHz Generator Board	298915
A5A6	35/35.5 MHz Generator Board	298926
A11	Power Supply Assembly	-
A11A1	Filter Board	298997
A11A2	+5.2 Volt Regulator Board	298998
A11A3	-12 Volt Regulator Board	299200
A11A4	Power Supply Motherboard	298928
A12	Rear Panel Assembly	298932
A13	Frequency Standard	298648 (3)
A14	Logic Power Distribution Board	299201

Notes: (1) Option 001 only

(2) Delete for Option 001

(3) Option 002 298648-3
Option 003 298648-2

TABLE 1-7

FREQUENCY EXTENDER ASSEMBLIES AND SUBASSEMBLIES

Reference Designation	Title	Part Number
A6	24/33 MHz Oscillator Assembly	298938
A6A1	24/33 MHz Oscillator Board	298949
A6A2	Isolator Divider Board	298952
A6A3	Isolator Amplifier Board	298953
A7	366 MHz Filter Converter Assembly	298961
A7A1	366 MHz Filter Converter Input Board	298962
A7A2	366 MHz Filter Converter Output Board	298963
A8	361/370 MHz Filter Amplifier Assembly	298954
A8A1	361/370 MHz Filter Amplifier Input Board	298955
A8A2	361/370 MHz Filter Amplifier Output Board	298956
A8A3	361/370 MHz Capacitor Board	298957
A9	330/331 MHz Filter Amplifier Assembly	298959
A9A1	330/331 MHz Filter Amplifier Input Board	298965
A9A2	330/331 MHz Filter Amplifier Output Board	298966
A10	High Frequency Subassembly	298937
A10A1	337 MHz Oscillator Isolator Board	298995
A10A2	337 MHz Isolator Board	298996
A10A3	30/40 MHz Filter Amplifier Board	298901
A10A4	330 MHz Power Amplifier	298902
A10A5	1-5 MHz Comb Generator Board	298900
A10A6	29 MHz Filter Converter Board	298903

CHAPTER 2

INSTALLATION

2-1. INTRODUCTION

2-2. This chapter describes unpacking, preparation for use, and initial checkout of the 360D11 Frequency Synthesizer with and without the 3600E1 Frequency Extender.

2-3. UNPACKING

2-4. No special instructions or precautions are necessary for unpacking the equipment except that reasonable care should be exercised to protect the RF section mating connectors from damage.

2-5. PREPARATION FOR USE

2-6. If a complete synthesizer was ordered, all components have been assembled at the factory and all connections made prior to shipment. Paragraphs 2-7 through 2-15 describe installation procedures if various components are ordered separately.

2-7. FREQUENCY EXTENDER INSTALLATION

2-8. If the mainframe contains a frequency extender, all connections have been made at the factory. If a frequency extender is being added to a mainframe, refer to Figure 2-1 and proceed as follows. (This procedure requires a 5/16-inch spintight.)

a. Disconnect the ac line cord and turn the frequency synthesizer upside down.
b. Remove the bottom cover.
c. Disconnect two cables W23A10J5 and W10A7J4 from each other and remove the interconnecting adapter.
d. Install frequency extender and secure in place with eight nuts.
e. Make the following connections to the frequency extender:

Cable	Frequency Extender Connection
W18A7J2	A7J2
W24A10J10	A10J10
W23A10J5	A10J5
W14A10J7	A10J7
W10A7J4	A7J4

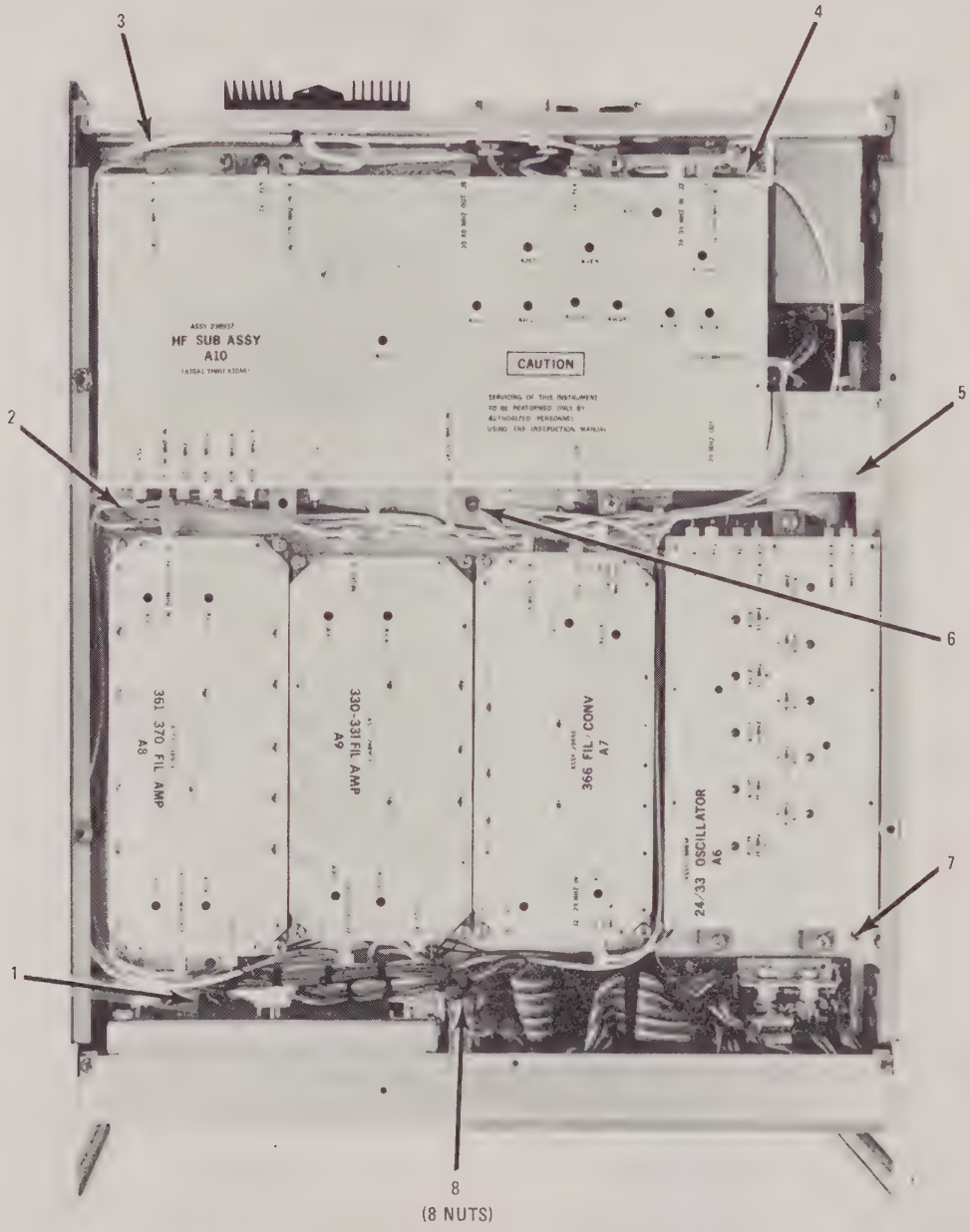


Figure 2-1. Frequency Extender Installation

f. Replace the bottom cover.

g. Turn frequency synthesizer right side up.

2-9. FREQUENCY STANDARD INSTALLATION

2-10. If the optional internal frequency standard (mainframe option -002 or -003) is ordered separately, it is installed as follows. (This procedure requires a phillips head screwdriver and a soldering iron.)

a. Disconnect ac line cord.

b. Remove cover plate above the frequency standard at right rear corner of mainframe.

c. Secure new cover plate to oven with three phillips head screws provided. (The long screw goes in the top center location.) Make certain the frequency adjustment screw is accessible through the adjustment hole.

d. Withdraw coiled cable and leads from inside mainframe.

e. Connect coaxial cable to SMA output connector of frequency standard.

f. Solder purple-white striped wire to feedthrough filter capacitor.

g. Solder black wire to ground lug under feedthrough filter capacitor.

h. Slip screw heads on top surface of oven through slots in bracket at top of well.

i. Slide the unit into mainframe until cover plate bottoms against rear panel. Secure with screws provided.

j. Connect BNC jumper cable between rear panel connectors marked, 10 MHz INT STD OUT and 5/10 MHz REF IN.

2-11. MODULATION SECTION INSTALLATION

2-12. If the RF section was ordered and shipped with a modulation section, the two units have been assembled at the factory prior to shipment. From an external viewpoint, the modulation section makes up the upper half of the RF section front panel. If this unit is in place, proceed directly to paragraph 2-14.

2-13. The modulation section is best installed with the RF section either completely removed from or partially inserted in the mainframe. (No tools are required for the following procedures.)

a. Insert modulation interface connector P3 through front panel opening and seat the connector in mating block J3 on RF section. Secure connector by finger-tightening the captive thumbscrews on P3.

b. Place lower edge of modulation section panel on upper edge of RF section panel. Make certain the metal tab on modulation section panel is behind the RF section panel.

c. Pivot panel back into recess provided. Secure unit by finger-tightening captive thumbscrews on modulation section front panel.

d. On PM3602 it is also necessary to secure rear support bracket to the RF section with a number six screw, nut, and lockwasher.

2-14. RF SECTION

2-15. Install the RF section by performing the following procedure:

CAUTION

Do not attempt to assemble the RF section to a mainframe if the connector alignment pins are bent, since this could cause extensive damage to the plug-in connectors.

a. Carefully slide unit about halfway into slot provided on right side of mainframe.

b. Make certain that the locking lever is at about a 45 degree angle with the front panel and fully seat the unit. The locking lever should pivot in towards panel.

c. Lock plug-in by depressing lever until latch engages.

2-16. RACK MOUNTING

2-17. A rack mounting adapter kit (006 Option) is required to secure the AILTECH 360 Frequency Synthesizer in a standard 19-inch rack. The kit consists of two right-angle brackets which bolt to the side of the unit. (See Figure 2-2.) Complete assembly instructions are provided with the kit.

CAUTION

A fully assembled AILTECH 360 Frequency Synthesizer can weigh as much as 85 lbs. Two persons are required to lift the unit, and it must be supported in a rack by some means other than the rack mounting kit. Full length shelf brackets or suitable rack-mount chassis slides (paragraph 2-18) are recommended for support in a rack.

2-18. Rack mount slide adapter kit (-007 Option) provides a suitable means for mounting the AILTECH 360 Frequency Synthesizer in a rack with chassis slides. (Slides are not

provided with the kit.) The kit consists of two replacement side panels for the mainframe and instructions illustrating a typical rack mounting installation. The panels are designed to mate with the Jonathan Manufacturing Company 310 series slide.

2-19. INITIAL TURN-ON

2-20. The location and function of the controls, indicators, and connectors on the mainframe are described in Chapter 3. Other controls, indicators, and connectors referenced in the following procedures are located on and described in the appropriate RF section instruction manual.

CAUTION

To prevent damage to the instrument, make line voltage selection before connecting line power. Also ensure that the line power cord is connected to a power circuit with a protective earth ground.

a. Set power switch at rear of frequency synthesizer to 115 or 230 volts depending on power source being used.
b. Set LINE switch on frequency synthesizer front panel to STDBY.
c. Set CONTROL switch to LOCAL.
d. Connect power cable at rear of frequency synthesizer to an uninterrupted source of 115/230-Vac, single-phase, 48- to 66-Hz power (50 to 400 Hz with Option -004). The STDBY light on front panel should go on.
e. If the frequency synthesizer contains Option -002 or -003 (internal frequency standard), allow the unit to warm-up for a minimum of 1 hour. (Refer to paragraph 3-5.)

2-21. INITIAL CHECKOUT

2-22. After an initial warmup period of 1 hour, check that the frequency synthesizer is operating properly as follows:

a. If the unit is not equipped with an optional, internal frequency standard (Option -002 or -003), connect a stable 5- or 10-MHz signal at 0 dBm to the rear panel BNC connector marked 5/10 MHZ REF IN.
b. Connect frequency counter to OUTPUT connector on front panel of RF section.
c. Connect REF OUTPUT at rear of synthesizer mainframe to external standard input of counter.

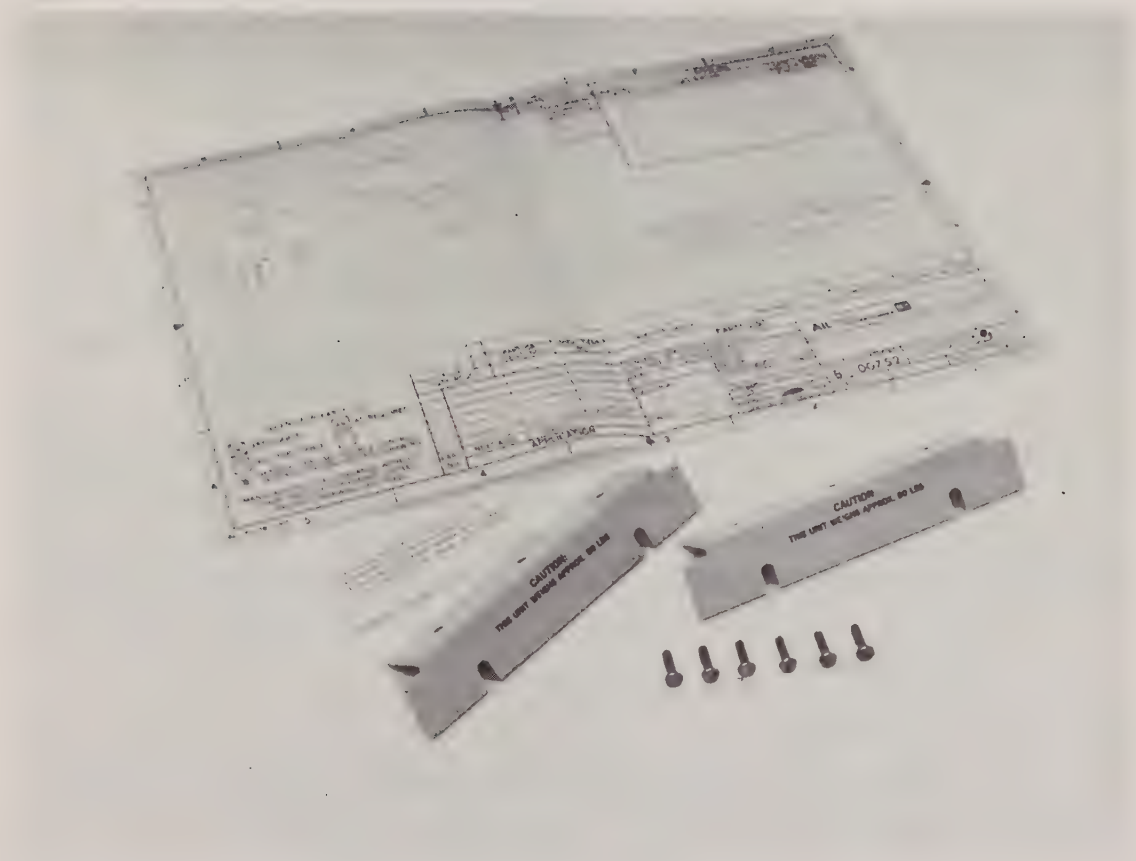


Figure 2-2. Rack Mounting Adapter Kit (Option 006)

d. Set frequency selection switches on frequency synthesizer front panel to any arbitrary frequency within range of RF section installed.

e. Set LINE switch to ON and check that frequency counter indicates selected frequency (± 1 count).

f. Refer to the instruction manual for the RF section in use for power output and flatness checks.

CHAPTER 3

OPERATION

3-1. INTRODUCTION

3-2. This chapter illustrates and describes the controls, indicators, and connectors of the AILTECH 360D11 Frequency Synthesizer Mainframe. It also provides operating instructions and a simple operating check which may be performed should the unit appear to malfunction.

3-3. CONTROLS, INDICATORS, AND CONNECTORS

3-4. Figure 3-1 shows the controls, indicators, and connectors on the front and rear panels of the frequency synthesizer mainframe. Table 3-1 lists the exact name of the control, reference designation, and function.

3-5. REFERENCE OSCILLATOR STABILIZATION

3-6. The AILTECH 360D11 Frequency Synthesizer Mainframe and 3600E1 Frequency Extender are used in conjunction with an appropriate P360 RF Section as a precision signal source. The frequency accuracy and precision is dependent upon an externally applied 5- or 10-MHz reference signal, or an optional, internal, oven-stabilized, 10-MHz crystal controlled oscillator. A minimum period of one hour is required for the oven to reach full operating temperature. The specified stability is obtained after the oscillator is on for a minimum of 72 hours. For this reason, the frequency synthesizer is provided with an ON/STDBY (standby) switch rather than a power on-off switch. It is suggested that the unit be connected to an uninterrupted source of ac power and remain in the standby mode when not being used. In this manner, the 10-MHz crystal oscillator is maintained at a constant temperature, and the frequency synthesizer is ready for immediate use without a long warmup period.

3-7. Before attempting to operate the synthesizer using the internal reference oscillator, make certain the BNC jumper cable between the INT STD OUT and the REF IN jacks at the rear of the mainframe is in place.

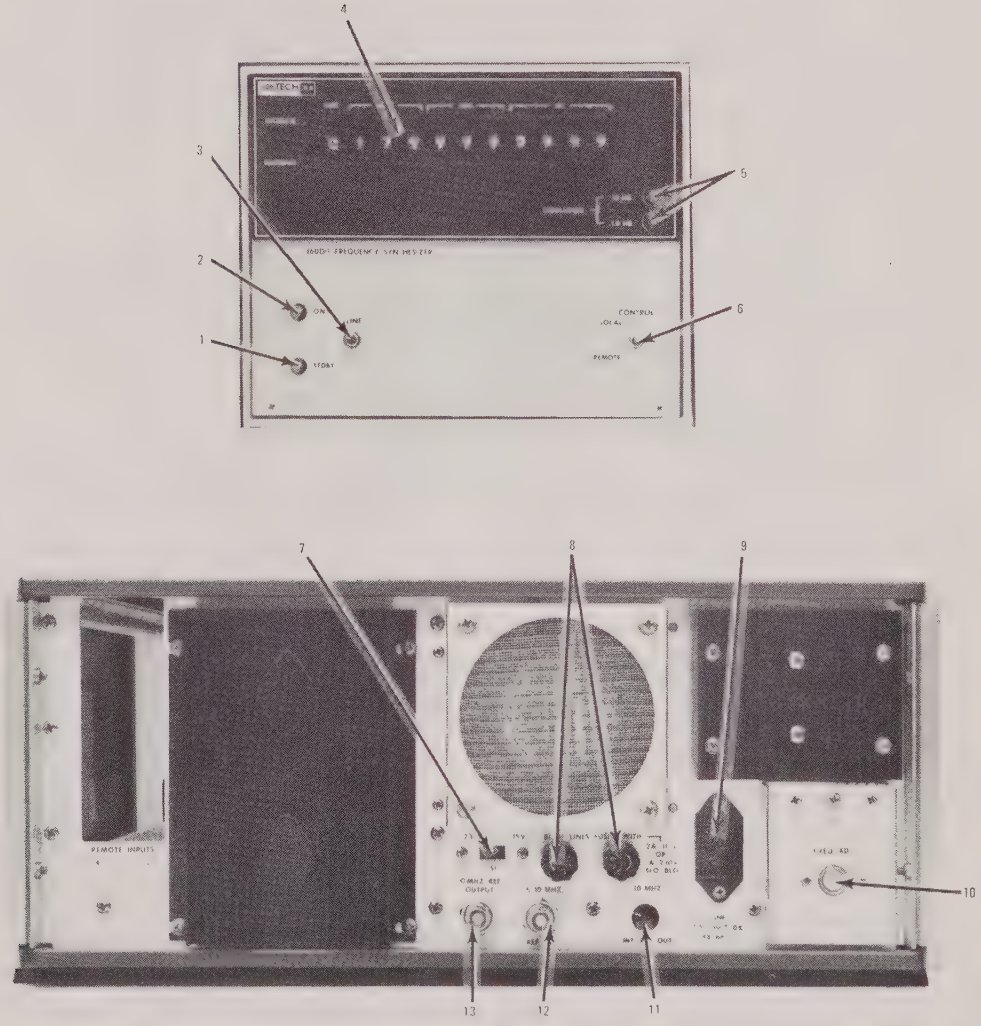


Figure 3-1. Frequency Synthesizer Mainframe, Controls and Indicators

TABLE 3-1

MAINFRAME CONTROLS, INDICATORS, AND CONNECTORS

Key	Name	Reference Designation	Function
1	STDBY indicator	A1L2	Yellow LED indicates line cord connected to a source of ac power. Internal reference oscillator and oven is energized.
2	ON indicator	A1L1	Green LED indicates power is applied to entire synthesizer.
3	LINE switch	A1S1	Toggle switch selects ON or STDBY condition.
4	INCREASE-DECREASE switches	A1A1S1-A1A1S11	Reversible thumbswitches set output frequency by decades.
5	10 Hz - 1.0 Hz RESOLUTION indicators	A1L3, A1L4	Two green LED's indicate minimum synthesized increment available.
6	LOCAL-REMOTE CONTROL switch	A1S2	Toggle switch selects front panel control (LOCAL) or rear panel inputs (REMOTE).
7	230V-115V switch	A12S1	Slide switch sets unit for operation from 230 or 115 volts rms line voltage.
8	Line fuses	A12F1, A12F2	Line fuses. 2.5 amps slo-blo for 115 volts rms line, or 1.5 amp slo-blo for 230 volts rms line.
9	LINE connector		Ac line input connector. 115/230V ±10% 48-66 Hz (48 - 420 Hz with Option -004).

TABLE 3-1

MAINFRAME CONTROLS, INDICATORS, AND CONNECTORS (cont)

Key	Name	Reference Designation	Function
10	FREQ. ADJ adjustment	A13	±2 parts in 10^6 frequency adjustments for optional internal frequency standard (Option -002 or -003).
11	10 MHZ INT STD OUT connector	A12J3	BNC output connector for internal frequency standard (not used unless Option -002 or -003 is installed).
12	5/10 MHZ REF IN connector	A12J2	BNC connector for internal or external frequency standard input to the synthesizer (5 or 10 MHz at 0 dBm).
13	10 MHZ REF OUTPUT connector	A12J1	BNC connector provides the buffered 10-MHz reference signal output (+3 dBm nominal).

3-8. OPERATING INSTRUCTIONS

3-9. LOCAL MODE

3-10. After initial installation and warmup, the frequency synthesizer can be operated with manual control of the output frequency from the front panel as follows:

a. Connect instruments or circuits requiring a precision frequency input to OUTPUT connector on RF section.

b. Set mainframe CONTROL switch to LOCAL.

c. Set desired frequency into the frequency selection switches by operating each INCREASE and DECREASE switch.

d. Set output level vernier (and optional step attenuator if installed) to the desired power output.

e. Set LINE switch to ON.

f. Readjust frequency and power as required. If an invalid frequency is selected, this will be indicated by illumination of the OUT OF RANGE indicator on the RF section front panel.

g. If the RF section is equipped with an External AM Section (PM3601), the synthesizer output may be amplitude modulated. Connect a dc to 100 kHz, 0 to 1 volt rms signal to MOD IN connector on RF section front panel. The modulation level will be proportional to the level present at the connector over a 0 to 95 percent range depending on plug-in being used. A sinewave with 0.5 volts rms amplitude will produce 50 percent modulation.

h. Programmable amplitude, frequency, and phase modulation is available with the PM3602 Modulation Section. Refer to the instruction manual for this unit for complete operating instructions.

3-11. REMOTE MODE

3-12. The output frequency, level, and modulation of the synthesizer may be controlled by remote programming inputs at the rear of the RF section. Refer to the applicable RF section instruction manual for remote frequency control instructions. Remote level control is provided with the addition of an optional attenuator. Remote modulation (AM, FM, and ØM) control is provided with the PM3602 Programmable Modulation Section. Programming instructions are provided in the manuals applicable to these functions.

3-13. To operate in the remote mode, proceed as follows:

a. Connect a source of programming information to the appropriate connectors on the RF section rear panel.

b. Set LOCAL-REMOTE switch to REMOTE.

3-14. OPERATORS MAINTENANCE.

3-15. If the frequency synthesizer appears to malfunction, perform the following checks:

a. If both the STDBY and ON indicators are inoperative (no ac power), check that the primary power source is turned on.

b. Check that the power cable is securely connected to the unit.

c. Check fuses at rear of unit and replace blown fuses. If fuses constantly blow, the unit requires more extensive repair. (See Chapter 4.)

d. If ac line power is applied but no output is available, check that the RF section is properly seated and locked in place.

e. Make certain the selected frequency is within the range of the RF section (OUT OF RANGE light is out).

f. Check that an appropriate internal or external reference source is connected to the mainframe REF IN connector.

g. Check that the output cable being used is not damaged or incorrectly connected. If an output is still not available, the unit requires more extensive repair. (See Chapter 4.)

CHAPTER 4

MAINTENANCE

4-1. INTRODUCTION

4-2. This chapter contains maintenance information for the Type 360D11 Frequency Synthesizer and the Type 3600E1 Frequency Extender. The maintenance philosophy used provides defined troubleshooting procedures to isolate a malfunction to a card or subassembly, then provides sufficient test data on each card or subassembly to allow a technician to further troubleshoot to a faulty component. To achieve these goals, this chapter contains the principles of operation of the frequency synthesizer and frequency extender to familiarize the technician with the operation of the units; a troubleshooting chart to isolate a malfunction to a card or subassembly; complete photographs of the units so that the technician can identify a faulty card or subassembly; principles of operation of each card and subassembly along with schematic diagrams, critical test data, service block diagrams, and parts location diagrams to enable the technician to isolate a malfunction to a particular component. In addition, this chapter contains several critical performance tests and adjustments to enable the technician to maintain the frequency synthesizer and frequency extender in optimum operating condition.

4-3. PRINCIPLES OF OPERATION

4-4. FREQUENCY SYNTHESIZER MAINFRAME (See Figure 4-1.)

4-5. The 360D11 Frequency Synthesizer Mainframe produces an output between 35 and 36 MHz selectable in 1.0-Hz increments (0.1 Hz with option -001). The basis for the extremely high accuracy of the Type 360D11 Frequency Synthesizer is 10-MHz standard oscillator A13 (-002 or -003 option). This oscillator is a highly stable, crystal-controlled oscillator in a proportionally controlled oven. If the -002 or -003 option is not included, an external 5-MHz or 10-MHz reference source may be used. The accuracy of the frequency synthesizer depends on the accuracy of the reference source used.

4-6. The reference output is applied to fixed frequency generator input board A5A1, where the 10-MHz signal is amplified and filtered before being distributed to various circuits in the mainframe. If a 5-MHz input is used, A5A1 acts as a frequency doubler producing the

10-MHz required by the rest of the unit. The output of A5A1 is applied to all the other printed circuit boards in A5 (A5A2-A5A6). In A5A2, the 10-MHz signal is supplied to two amplifier and filter channels to provide two 10-MHz outputs. One output is applied to the RF plug-in section being used. The second output is supplied to an output connector at the rear of the frequency synthesizer to serve as a highly accurate 10-MHz reference signal. Board A5A3 is a 60-MHz generator. In A5A3, the 10-MHz signal is multiplied by 6, filtered, and the resultant 60-MHz output is supplied to 1 to 5 MHz comb generator A10A5 in the frequency extender.

4-7. The 65-MHz generator (A5A4) and 64-MHz generator (A5A5) generate the two comb line frequencies used in the mainframe. The 65-MHz generator multiplies the 10-MHz input by 13 and divides by 2 to produce the 65-MHz output. The 64-MHz generator multiplies the 10-MHz input by 8, divides the result by 5, and multiplies the 16-MHz result by 4 to produce the 64-MHz output. The 64- and 65-MHz output of A5A4 and A5A5, respectively, are both applied through A4 to all BCD sections.

4-8. The 10-MHz also is applied to 35/35.5 MHz board A5A6. In A5A6, the 10-MHz signal is multiplied by 7 and divided by 2, and the resultant 35-MHz signal is applied to the board output as well as to a divide-by-10 circuit within the board. The 64-MHz input to A5A6 (from A5A5) is mixed with the second harmonic of the divide-by-10 circuit (7 MHz) and band-pass filtered to produce a 71-MHz signal. This signal is divided by 2 to produce the 35.5-MHz output signal. A logic circuit on the card, which is controlled by the plug-in logic, determines whether the 35-MHz or 35.5-MHz signal will be available at the A5A6 output. This output provides the starting frequency for the BCD synthesis section.

4-9. The 35/35.5 MHz output of A5A6 is applied to lower order BCD board A2A5. With the -001 option, the A2A5 board produces the tenths of a Hertz output. When this option is not used, the A2A5 board (P/N 299214) is replaced by a jumper board (P/N 299255) and the tenths of a Hertz digit is not produced. The 35/35.5 MHz is applied through the jumper board to A2A4. The jumper board also transfers control of the 35/35.5 MHz logic to the 0.1 Hz logic line instead of the 0.05 Hz logic as it would be controlled with option -001. The 64 and 65 MHz comb line frequencies are also applied to the lower order BCD boards from A4A6 after being buffered on 10 kHz BCD Board A4A11. These buffered comb line frequencies are applied directly to A2A1 and are further buffered and distributed from there to A2A2, A2A3, A2A4, and A2A5.

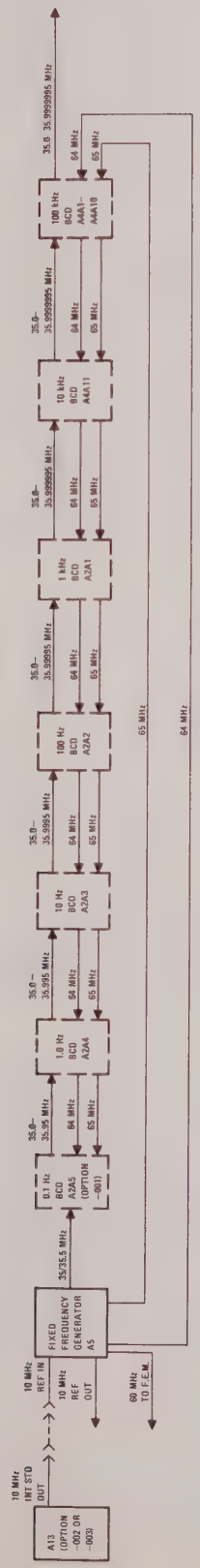


Figure 4-1. Frequency Synthesizer Mainframe, Functional Block Diagram

4-10. Selection of a frequency to be produced by the frequency synthesizer is set into the front panel thumbwheels on frequency select switch mother board A1A1. The thumbwheel information is routed to the plug-in section which contains a logic converter. The logic converter is in the plug-in section because each plug-in unit requires different logic signals depending upon the frequency range of the particular unit. The logic signals are returned to the frequency synthesizer through the plug-in module interface, J1 and J2, and are distributed by logic and power distribution board A14 to all BCD boards. Table 4-1 lists the signal name at each pin of the interface connector.

4-11. The logic signals representing the selected frequency output cause the lower order BCD boards to generate the lower order numbers. Board A2A5 generates the tenth of a Hertz digit (if -001 option is used); A2A4 generates the 1-Hz digit; A2A3 generates the 10-Hz digit, A2A2 generates the 100-Hz digit; and A2A1 generates the 1-kHz digit. Each digit is generated and added to the output of the BCD stage which feeds that particular stage thus forming a chain. (See paragraph 4-29 for a detailed description of how each BCD stage operates to produce its applicable digit). The output of A2A1 is applied to the higher order BCD assembly.

4-12. The higher order BCD assembly selects the 10-kHz and 100-kHz digits in the frequency synthesizer output. A4A11 generates the 10-kHz steps and A4A1-A4A10 produce the 100-kHz step. A4A1 through A4A4 are driven by 64/65 MHz switches A4A7 through A4A10, respectively. The BCD-8 #2 board (A4A5) functions as a final divider, filter, and amplifier for the selected frequency synthesizer mainframe output.

4-13. FREQUENCY EXTENDER (See Figure 4-2)

4-14. The purpose of the frequency extender is to add 1-MHz steps to the 35- to 36-MHz output of the frequency synthesizer mainframe, to extend the output to cover a 30- to 40-MHz output for use by certain plug-in units. The principle of drift cancellation is used to accomplish this extension.

4-15. Logic inputs to 24 to 33 MHz oscillator A6 control the frequency generated by A6. One output of A6 is applied to 29 MHz converter A10A6. The same logic which selects the A6 output also is applied to 1 to 5 MHz comb generator A10A5. This logic selects a comb line frequency between 1 and 5 MHz, which when mixed with the A6 output, results in a constant 29-MHz output from 29-MHz converter A10A6. The 1 to 5 MHz comb lines are developed from a 60-MHz input to A10A5 using a programmable counter technique. The 60-MHz input comes from 60-MHz generator A5A3 in the mainframe.

TABLE 4-1

PLUG-IN/MAINFRAME INTERFACE (PMI)
WIRE LIST

From	To	Signal Name
J1-A	A14 J6-16	BCD 1 kHz-1
J1-B	A1/A1 J1-13	Loc 100 kHz-2
J1-C	A5 J2	10 MHz (Coax)
J1-D	A1/A1 J1-26	Loc 100 kHz-8
J1-E	A14 J6-5	BCD 1 kHz-8
J1-F	A1/A1 J1-12	Loc 100 kHz-4
J1-H	A14 J6-18	BCD 1 kHz-2
J1-J	A1/A1 J1-25	Loc 100 kHz-1
J1-K	A14 J6-15	BCD 1 kHz-4
J1-L	A1/A1 J1-11	Loc 1 MHz-4
J1-M	A14 J6-1	BCD 100 Hz-2
J1-N	A1/A1 J1-24	Loc 1 MHz-2
J1-P	A14 J6-3	BCD 100 Hz-4
J1-R	A1/A1 J1-10	Loc 1 MHz-8
J1-S	A14 J6-9	BCD 1.0 Hz-1
J1-T	A1/A1 J1-23	Loc 1 MHz-1
J1-U	A14 J6-11	BCD 1.0 Hz-8
J1-V	A1/A1 J1-9	Loc 10 MHz-4
J1-W	A14 J6-10	BCD 1.0 Hz-2
J1-X	A1/A1 J1-22	Loc 10 MHz-2
J1-Y	A14 J6-12	BCD 1.0 Hz-4
J1-Z	A1/A1 J1-8	Loc 10 MHz-8
J1-AA	A1/A1 J1-15	Loc 100 Hz-4
J1-BB	A14 J6-22	FEM 1 MHz-2
J1-CC	A1/A1 J1-2	Loc 100 Hz-1
J1-DD	A14 J6-19	FEM 1 MHz-8
J1-EE	A1/A1 J1-14	Loc 100 Hz-2
J1-FF	A14 J6-23	FEM 1 MHz-1
J1-HH	A1/A1 J1-1	Loc 100 Hz-8
J1-a	A14 J6-24	BCD 0.1 Hz-8

TABLE 4-1

PLUG-IN/MAINFRAME INTERFACE (PMI)
WIRE LIST (cont)

From	To	Signal Name
J1-b	A1/A1 J1-21	Loc 10 MHz-1
J1-c	A14 J6-25	BCD 0.1 Hz-4
J1-d	A1/A1 J1-7	Loc 1 kHz-4
J1-e	A14 J6-5	BCD 10 Hz-1
J1-f	A1/A1 J1-20	Loc 1 kHz-2
J1-h	A14 J6-26	BCD 0.1 Hz-2
J1-j	A1/A1 J1-6	Loc 1 kHz-1
J1-k	A14 J6-20	BCD 10 Hz-8
J1-m	A1/A1 J1-19	Loc 1 kHz-8
J1-n	A14 J6-13	BCD 0.1 Hz-1
J1-p	A1/A1 J1-5	Loc 1.0 Hz-4
J1-r	A14 J6-7	BCD 10-Hz-4
J1-s	A1/A1 J1-18	Loc 1.0 Hz-2
J1-t	A14 J6-6	BCD 10 Hz-2
J1-u	A1/A1 J1-4	Loc 1.0 Hz-8
J1-v	A14 J6-14	BCD 100 Hz-1
J1-w	A1/A1 J1-17	Loc 1.0 Hz-1
J1-x	A14 J6-2	BCD 100 Hz-8
J1-y	A14 J6-8	0.05 Hz Log
J1-z	A14 J6-21	FEM 1 MHz-4
J2-A	E1	Gnd.
J2-B	A14 J3-6	5.2V
J2-C	A10 J5	30/40 MHz (coax)
J2-D	A14 J3-7	5.2V
J2-E	A14 J3-5	5.2V
J2-F	A1/A1 J2-13	Loc 0.1 Hz-8
J2-H	A10 J10	29 MHz (coax)
J2-J	A1/A1 J2-26	Loc 10 Hz-4
J2-K	A14 J5-1	BCD 10 kHz-8
J2-L	A1/A1 J2-12	Loc 0.1 Hz-4

TABLE 4-1

PLUG-IN/MAINFRAME INTERFACE (PMI)
WIRE LIST (cont)

From	To	Signal Name
J2-M	A7 J2	29 MHz (coax)
J2-N	A1/A1 J2-25	Loc 10 Hz-8
J2-P	A14 J5-6	BCD 10 kHz-1
J2-R	A1/A1 J2-11	Loc 0.1 Hz-2
J2-S	A14 J5-3	BCD 10 kHz-2
J2-T	A1/A1 J2-24	Loc 10 Hz-2
J2-U	A14 J5-2	BCD 10 kHz-4
J2-V	A1/A1 J2-10	Loc 0.1 Hz-1
J2-W	Not Used	
J2-X	A1/A1 J2-23	Loc 10 Hz-1
J2-Y	A14 J5-4	Reslt 2
J2-Z	A1/A1 J2-9	Loc 100 MHz-4
J2-AA	A1/A1-J2-17	Loc 10 kHz-8
J2-BB	A14 J3-1	-12 VOP
J2-CC	A1/A1 J2-4	Loc 10 kHz-2
J2-DD	A14 J3-9	-12 VOP
J2-EE	A14 J3-4	5.2V
J2-FF	A14 J3-2	-12 VOP
J2-HH	A14 J5-24	Loc/Rem
J2-a	Not Used	
J2-b	A1/A1 J2-22	Loc 100 MHz-2
J2-c	A14 J5-5	Reslt 1
J2-d	A14 J5-11	Loc/Rem
J2-e	A14 J5-10	BCD 100 kHz-1
J2-f	A1/A1 J2-21	Loc 100 MHz-8
J2-h	A14 J5-7	BCD 100 kHz-8
J2-j	A1/A1 J2-8	Loc 100 MHz-1
J2-k	A14 J5-9	BCD 100 kHz-2
J2-m	A1/A1 J2-20	Loc 1 GHz-4
J2-n	A14 J5-8	BCD 100 kHz-4

TABLE 4-1

PLUG-IN/MAINFRAME INTERFACE (PMI)
WIRE LIST (cont)

From	To	Signal Name
J2-p	A1/A1 J2-7	Loc 1 GHz-2
J2-r	Not Used	
J2-s	A1/A1 J2-19	Loc 1 GHz-8
J2-t	A12 S1-9	ACH-1 COAX
J2-u	A1/A1 J2-6	Loc 1 GHz-1
J2-v	A12 S1-11	ACN-1 COAX
J2-w	A1/A1 J2-18	Loc 10 kHz-1
J2-x	A12 S1-8	ACH-2 COAX
J2-y	A1/A1 J2-5	Loc 10 kHz-4
J2-z	A12 S1-12	ACN-2 COAX

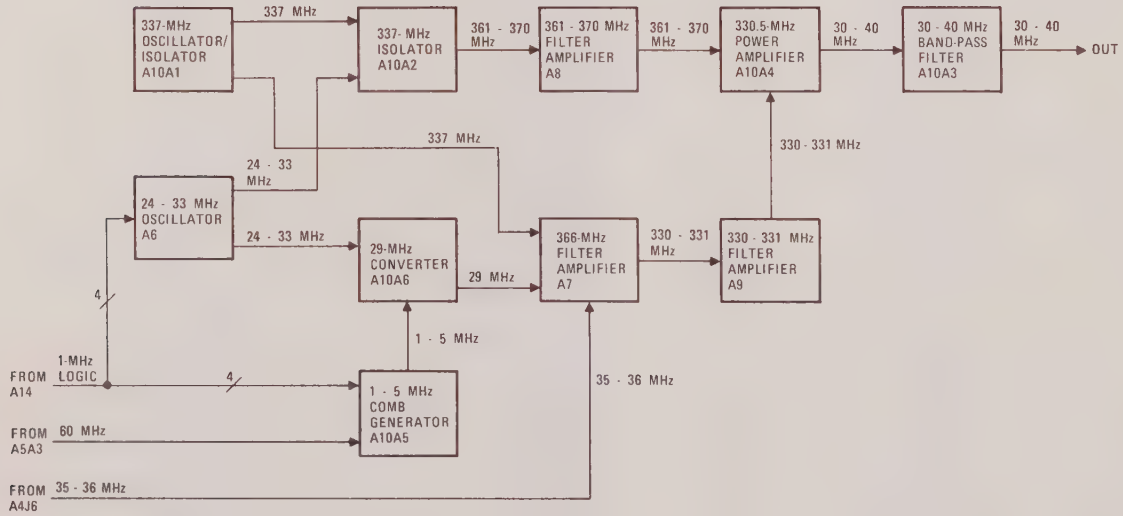


Figure 4-2. Frequency Extender, Functional Block Diagram

4-16. Another output of A6 is mixed in A10A2 with a 337-MHz signal from 337 MHz oscillator/isolator A10A1 to produce a 361- to 370-MHz output. This output is amplified and band-pass filtered in 361 to 370 MHz filter amplifier A8 and applied to a frequency converter on A10A4.

4-17. A second 337-MHz output of A10A1 is applied to 366 MHz filter amplifier A7 and mixed with the 29-MHz input from A10A6 to produce a 366-MHz signal. After band-pass filtering, the 366-MHz signal is mixed with the 35- to 36-MHz signal from the mainframe to produce a signal between 330 and 331 MHz. This signal is band-pass filtered in 330 to 331 MHz filter amplifier A9 and applied to 330.5 MHz power amplifier A10A4.

4-18. In 330.5 MHz power amplifier A10A4, the 330- to 331-MHz output of A9 is amplified and mixed with the 361 to 370 MHz output of A8 to produce a frequency between 30 and 40 MHz. This 30- to 40-MHz output is band-pass filtered in 30 to 40 MHz band-pass filter A10A3 before being applied to the plug-in unit being used.

4-19. The Drift Cancellation principal can be illustrated by observing what happens if the 24-33 MHz oscillator is deviated from its nominal value by a frequency error Δf. For the case where 30.000000 MHz is selected, a logic 'O' is programmed to the Frequency Extender module. The 24-33 MHz oscillator should be at 24 MHz and the 1-5 MHz comb generator is at 5 MHz. The frequency in the 361-370 MHz filter will then be Δf higher than 361 MHz. At the same time, however, the 29 MHz signal in A10A6 will be Δf high causing the 366 MHz signal in A7 to high by Δf also. This causes the 330 MHz signal to be high by Δf, but this signal is subtracted from the 361 x Δf MHz signal in A10A4. The net result is $(361 + \Delta F) - (330 + \Delta f) = 30$ MHz which is exactly what was selected. Therefore any drift of the 24-33 MHz oscillator is cancelled by this technique.

4-20. TROUBLESHOOTING

4-21. FREQUENCY SYNTHESIZER MAINFRAME

4-22. Figure 4-3 is a troubleshooting chart for the frequency synthesizer mainframe. Through use of the chart and the servicing block diagram (Figure 4-4) a malfunction can be isolated to a board or subassembly. Figure 4-5 shows the location of all boards and subassemblies in the mainframe. To further isolate a malfunction to a defective component on a board or subassembly see the applicable paragraph on repair of the board or subassembly.

4-23. FREQUENCY EXTENDER.

4-24. The troubleshooting procedure philosophy for the frequency extender is the same as that for the mainframe as described in paragraph 4-22. Figure 4-6 is the troubleshooting chart, figure 4-7 is the servicing block diagram, and figure 4-8 shows the location of boards and subassemblies in the frequency extender.

4-25. REPAIR.

4-26. INTRODUCTION

4-27. The following paragraphs provide repair data for boards and subassemblies of the frequency synthesizer mainframe. (Repair data for the frequency extender is given in paragraphs 4-98 through 4-156.) The data is presented in the form of functional description (with significant circuit parameters), schematic diagrams, parts location diagrams, and references to the servicing block diagrams, replaceable parts list, and recommended test equipment to be used (see Table 1-5). With all of the data presented, an experienced technician should be able to isolate a malfunction to a component on a board or subassembly with the board or subassembly either in the frequency synthesizer (normal system signals being used) or on a bench (simulated signals being used). To further aid in understanding the functional descriptions presented in the following paragraphs, figure 4-9 is provided to show the internal structure of all integrated circuits used in the frequency synthesizer.

4-28. Repair data for each printed circuit board can be found on the servicing block diagram, the referenced schematic diagrams, and in the functional descriptions. To facilitate identification of parts, component location diagrams are included for each printed circuit card. A description of each component is given in Chapter 5.

4-28A. FREQUENCY SELECT SWITCH ASSEMBLY A1A1

4-28B. This assembly consists of a printed circuit board and 11 pushbutton frequency select switches. Each switch generates a four bit BCD code for the decimal digit selected for the particular decade. The information generated by this unit is the LOCAL frequency input to the logic converter in the plug-in. Figure 4-9A is the schematic of this assembly.

4-29. LOWER AND HIGHER ORDER BCD SECTION

4-30. The BCD section consisting of modules A2 and A4 form the heart of the frequency synthesizer mainframe. The standard unit has 6 BCD decades generating 10^6 frequency steps with a 1.0-Hz resolution. Option -001 provides 7 decades with 10^7 steps and 0.1-Hz resolution. The four lower order decades, or five decades in the 001 option, are housed in lower order BCD A2. The function of each decade is essentially similar,

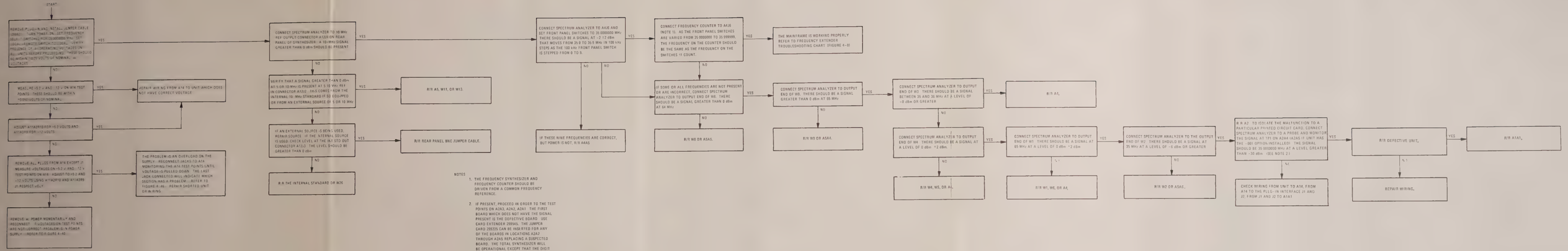

START
REMOVE PLUG-IN AND INSTALL JUMPER CABLE (0960-[illegible]) BETWEEN J1 AND J2 OF A14. SET FREQUENCY SELECTOR SWITCHES FOR 35.0000000 MHz. SET LOCAL-REMOTE SWITCH TO LOCAL. VERIFY FREQUENCY IS ±1 OPERATING WITH A STEP SIZE OF 100 KHz. REPLACE PLUG-IN. +15V SHOULD BE WITHIN 0.5 VOLTS OF NOMINAL +15 VOLTS.
YES
NO
MEASURE +15 V AND -12 V ON A14 TEST POINTS. THESE SHOULD BE WITHIN 10 PERCENT OF NOMINAL.
YES
REPAIR WIRING FROM A14 TO UNIT WHICH DOES NOT HAVE CORRECT VOLTAGE.
NO
ADJUST A14A3R30 FOR +12 VOLTS AND A14A3R29 FOR -12 VOLTS.
YES
NO
REMOVE ALL PLUGS FROM A14 EXCEPT J1. MEASURE VOLTAGES ON +12 V AND -12 V TEST POINTS ON A14. ADJUST TO +12 V AND -12 V OUTPUTS AT A14A3R30 AND A14A3R29 AT RESPECTIVELY.
YES
THE PROBLEM IS AN OVERLOAD ON THE SUPPLY. RECONNECT JACKS TO A14 MONITORING THE A14 TEST POINTS UNTIL VOLTAGE IS PULLED DOWN. THE LAST JACK CONNECTED WILL INDICATE WHICH SECTION HAS A PROBLEM. REFER TO FIGURE 4-4a. REPAIR SHORTED UNIT OR WIRING.
NO
REMOVE W. POWER MOMENTARILY AND RECONNECT. CHECK VOLTAGES ON TEST POINTS AND NOTE CORRECT. PROBLEM IS IN POWER SUPPLY. REFER TO FIGURE 4-4d.
CONNECT SPECTRUM ANALYZER TO 50 MHz REF OUTPUT CONNECTOR A12J5 ON REAR PANEL OF SYNTHESIZER. A 10-MHz SIGNAL GREATER THAN 0 dBm SHOULD BE PRESENT.
YES
NO
VERIFY THAT A SIGNAL GREATER THAN 0 dBm AT A 10 MHz IS PRESENT AT 5 TO 7Vp-p AT IN CONNECTOR A13J2. (NOTE: THIS COMES FROM THE INTERNAL 10 MHz STANDARD IF SO EQUIPPED OR FROM AN EXTERNAL SOURCE OF 5 OR 10 MHz.
YES
R/R A5, W11, OR W13.
NO
IF AN EXTERNAL SOURCE IS BEING USED, REPAIR SOURCE. IF THE INTERNAL SOURCE IS USED CHECK LEVEL AT THE INT STD OUT CONNECTOR A12J3. THE LEVEL SHOULD BE GREATER THAN 0 dBm.
YES
R/R REAR PANEL BNC JUMPER CABLE.
NO
R/R THE INTERNAL STANDARD OR W26.
CONNECT SPECTRUM ANALYZER TO A4J5 AND SET FRONT PANEL SWITCHES TO 35.0000000 MHz. THERE SHOULD BE A SIGNAL AT -2 TO 2 dBm THAT MOVES FROM 35.0 TO 39.9 MHz IN 100 kHz STEPS AS THE 100 kHz FRONT PANEL SWITCH IS STEPPED FROM 0 TO 9.
YES
NO
IF THESE NINE FREQUENCIES ARE CORRECT, BUT POWER IS NOT, R/R A4A5.
NO
CONNECT FREQUENCY COUNTER TO A4J5 (NOTE 1). AS THE FRONT PANEL SWITCHES ARE VARIED FROM 35.0000000 TO 35.999999, THE FREQUENCY ON THE COUNTER SHOULD BE THE SAME AS THE FREQUENCY ON THE SWITCHES (1 COUNT).
YES
THE MAINFRAME IS WORKING PROPERLY. REFER TO FREQUENCY EXTENDER TROUBLESHOOTING CHART (FIGURE 4-8).
NO
IF SOME OR ALL FREQUENCIES ARE NOT PRESENT OR ARE INCORRECT, CONNECT SPECTRUM ANALYZER TO OUTPUT END OF W8. THERE SHOULD BE A SIGNAL GREATER THAN 0 dBm AT 64 MHz.
YES
CONNECT SPECTRUM ANALYZER TO OUTPUT END OF W8. THERE SHOULD BE A SIGNAL GREATER THAN 0 dBm AT 65 MHz.
YES
CONNECT SPECTRUM ANALYZER TO OUTPUT END OF W7. THERE SHOULD BE A SIGNAL BETWEEN 35 AND 36 MHz AT A LEVEL OF -8 dBm OR GREATER.
YES
R/R A4.
NO
CONNECT SPECTRUM ANALYZER TO OUTPUT END OF W6. THERE SHOULD BE A SIGNAL AT A LEVEL OF 0 dBm ±2 dBm.
YES
CONNECT SPECTRUM ANALYZER TO OUTPUT END OF W1. THERE SHOULD BE A SIGNAL AT 65 MHz AT A LEVEL OF -8 dBm ±2 dBm.
YES
CONNECT SPECTRUM ANALYZER TO THE OUTPUT END OF W2. THERE SHOULD BE A SIGNAL AT 35 MHz AT A LEVEL OF -8 dBm OR GREATER.
YES
R/R A2. TO ISOLATE THE MALFUNCTION TO A PARTICULAR PRINTED CIRCUIT CARD, CONNECT SPECTRUM ANALYZER TO A PROBE AND MONITOR THE SIGNAL AT TP1 ON A2A4 (A2A5 IF UNIT HAS THE -901 OPTION INSTALLED). THIS SIGNAL SHOULD BE 35.0000000 MHz AT A LEVEL GREATER THAN -30 dBm. (SEE NOTE 2.)
YES
R/R DEFECTIVE UNIT.
YES
R/R A1A1.
NO
R/R W4, W5, OR A4.
NO
R/R W1, W6, OR A4.
NO
R/R W2 OR A5A6.
NO
CHECK WIRING FROM UNIT TO A14, FROM A14 TO THE PLUG-IN INTERFACE J1 AND J2, FROM J1 AND J2 TO A1A1.
NO
REPAIR WIRING.
NO
R/R W3 OR A5A6.
NO
R/R W8 OR A5A5.
NOTES
1. THE FREQUENCY SYNTHESIZER AND FREQUENCY COUNTER SHOULD BE DRIVEN FROM A COMMON FREQUENCY REFERENCE.
2. IF PRESENT, PROCEED IN ORDER TO THE TEST POINTS ON A2A3, A2A2, A2A1. THE FIRST BOARD WHICH DOES NOT HAVE THE SIGNAL PRESENT IS THE DEFECTIVE BOARD. USE CARD EXTENDER 29854S. THE JUMPER CARD 29929S CAN BE INSERTED FOR ANY OF THE BOARDS IN LOCATIONS A2A2 THROUGH A2A5 REPLACING A SUSPECTED BOARD. THE TOTAL SYNTHESIZER WILL BE OPERATIONAL EXCEPT THAT THE DIGIT REPLACED WILL HAVE ONLY THE VALUE "0" INDEPENDENT OF WHAT IS PROGRAMMED SEQUENCE THROUGH THE NUMBERS AND NOTE WHICH DECADE OR DECADES ARE DEFECTIVE. CHECK THE LOGIC LINES AT THE PARTICULAR UNITS IN QUESTION e.g., IF THE FREQUENCY ERROR OCCURS FOR STEPS IN THE 1-kHz DECADE, A2A1 WOULD BE SUSPECT. CHECK LOGIC LINES AT THE PC BOARD CONNECTOR.
3. R/R MEANS REPAIR OR REPLACE.

Figure 4-3. Frequency Synthesizer Mainframe, Troubleshooting Chart

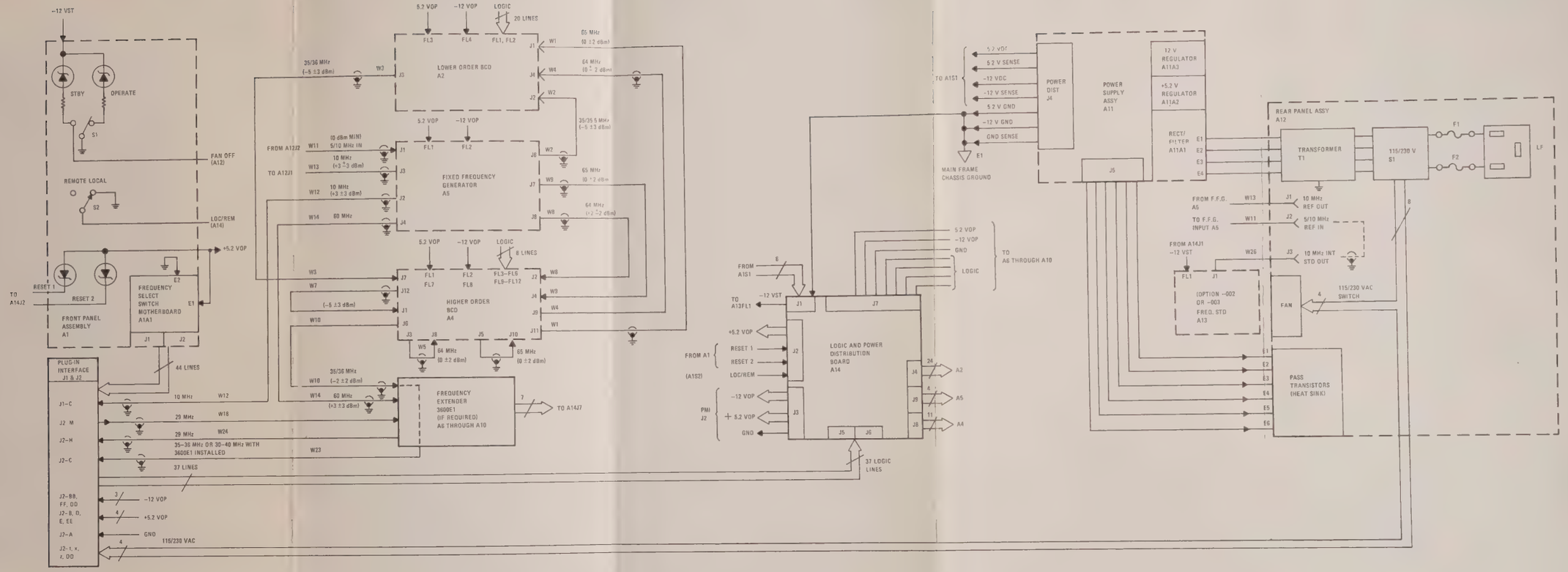


Figure 4-4. Frequency Synthesizer Mainframe, Servicing Block Diagram

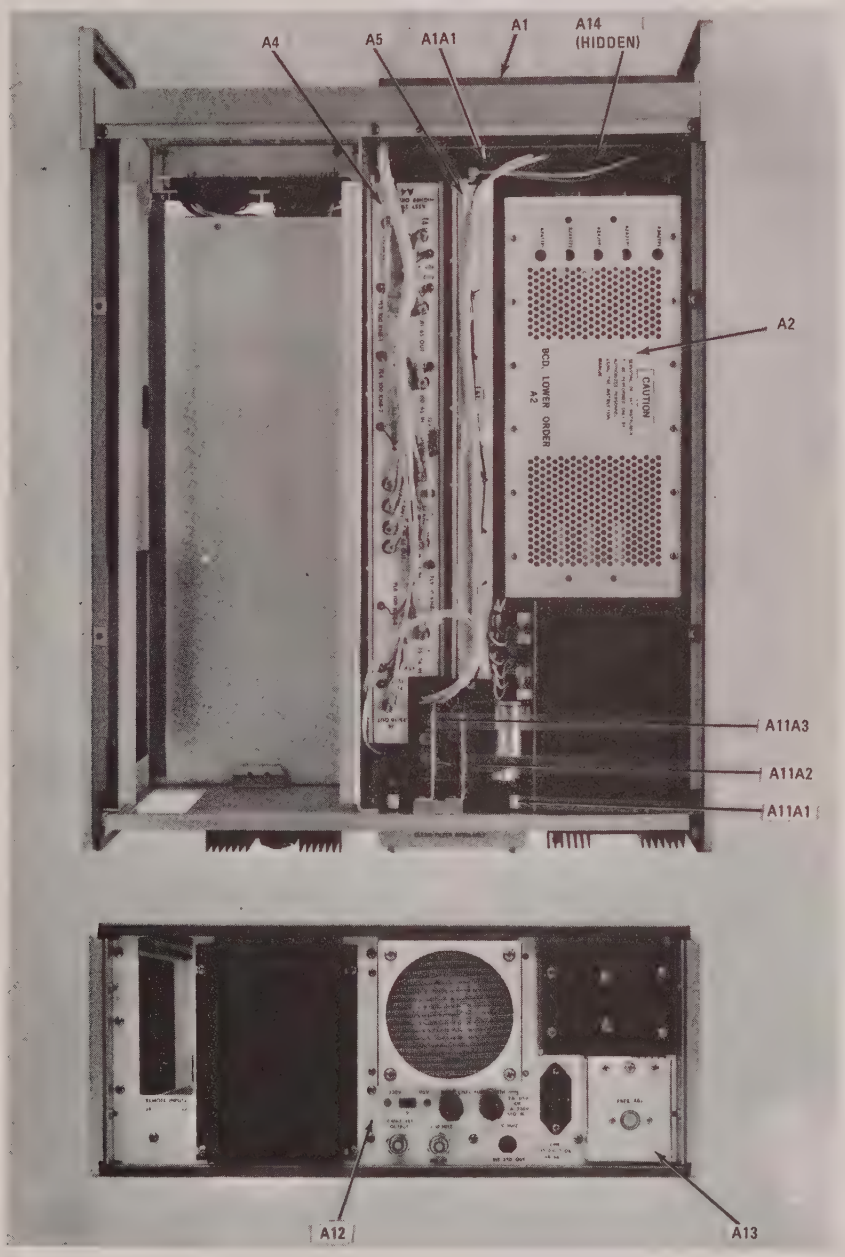
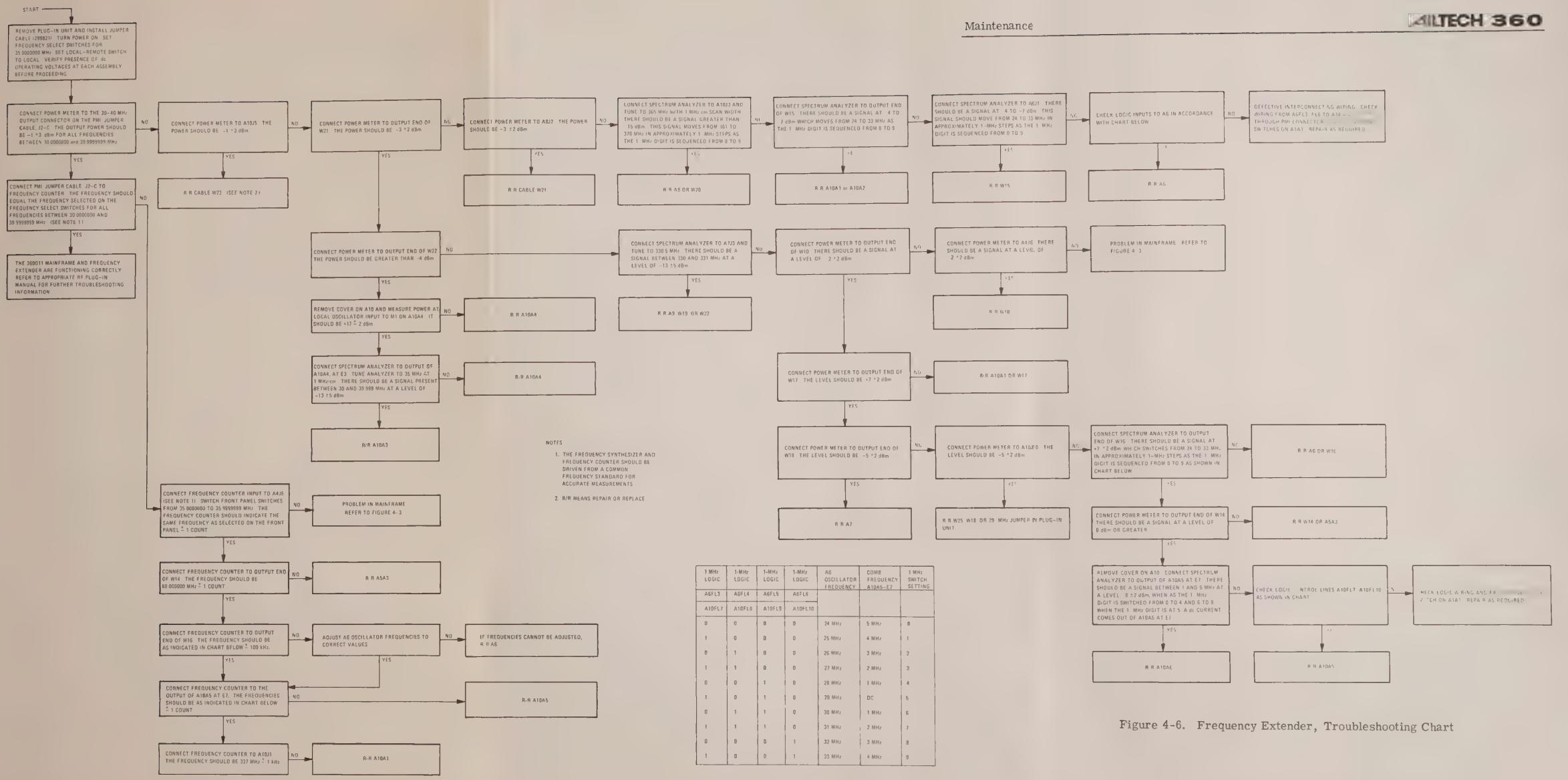


Figure 4-5. Frequency Synthesizer Mainframe, Subassembly Locations


START
REMOVE PLUG-IN UNIT AND INSTALL JUMPER CABLE (2988211). TURN POWER ON. SET FREQUENCY SELECT SWITCHES FOR 35.0000000 MHz. SET LOCAL-REMOTE SWITCH TO LOCAL. VERIFY PRESENCE OF +5 OPERATING VOLTAGES AT EACH ASSEMBLY BEFORE PROCEEDING
CONNECT POWER METER TO THE 30-40 MHz OUTPUT CONNECTOR ON THE PMI JUMPER CABLE, J2-C. THE OUTPUT POWER SHOULD BE −1 ±3 dBm FOR ALL FREQUENCIES BETWEEN 30.0000000 and 39.9999999 MHz
NO
YES
CONNECT PMI JUMPER CABLE J2-C TO FREQUENCY COUNTER. THE FREQUENCY SHOULD EQUAL THE FREQUENCY SELECTED ON THE FREQUENCY SELECT SWITCHES FOR ALL FREQUENCIES BETWEEN 30.0000000 AND 39.9999999 MHz. (SEE NOTE 1)
NO
YES
THE 360D11 MAINFRAME AND FREQUENCY EXTENDER ARE FUNCTIONING CORRECTLY. REFER TO APPROPRIATE RF PLUG-IN MANUAL FOR FURTHER TROUBLESHOOTING INFORMATION
CONNECT POWER METER TO A10J5. THE POWER SHOULD BE −1 ±3 dBm
NO
YES
R R CABLE W23 (SEE NOTE 2)
CONNECT POWER METER TO OUTPUT END OF W21. THE POWER SHOULD BE −3 ±2 dBm
NO
YES
CONNECT POWER METER TO OUTPUT END OF W22. THE POWER SHOULD BE GREATER THAN −4 dBm
NO
YES
REMOVE COVER ON A10 AND MEASURE POWER AT LOCAL OSCILLATOR INPUT TO M1 ON A10A4. IT SHOULD BE +17 ± 2 dBm
NO
R R A10A4
YES
CONNECT SPECTRUM ANALYZER TO OUTPUT OF A10A4, AT E3. TUNE ANALYZER TO 35 MHz AT 1 MHz/cm. THERE SHOULD BE A SIGNAL PRESENT BETWEEN 30 AND 39.999 MHz AT A LEVEL OF −13 ±5 dBm
NO
R/R A10A4
YES
R/R A10A3
CONNECT FREQUENCY COUNTER INPUT TO A4J6 (SEE NOTE 1). SWITCH FRONT PANEL SWITCHES FROM 35.0000000 TO 35.9999999 MHz. THE FREQUENCY COUNTER SHOULD INDICATE THE SAME FREQUENCY AS SELECTED ON THE FRONT PANEL ± 1 COUNT
NO
PROBLEM IN MAINFRAME. REFER TO FIGURE 4-3
YES
CONNECT FREQUENCY COUNTER TO OUTPUT END OF W14. THE FREQUENCY SHOULD BE 60.000000 MHz ± 1 COUNT
NO
R R A5A3
YES
CONNECT FREQUENCY COUNTER TO OUTPUT END OF W16. THE FREQUENCY SHOULD BE AS INDICATED IN CHART BELOW ± 100 kHz.
NO
ADJUST A6 OSCILLATOR FREQUENCIES TO CORRECT VALUES
NO
IF FREQUENCIES CANNOT BE ADJUSTED, R R A6
YES
CONNECT FREQUENCY COUNTER TO THE OUTPUT OF A10A5 AT E7. THE FREQUENCIES SHOULD BE AS INDICATED IN CHART BELOW ± 1 COUNT
NO
R/R A10A5
YES
CONNECT FREQUENCY COUNTER TO A10J1. THE FREQUENCY SHOULD BE 337 MHz ± 1 kHz
NO
R/R A10A1
CONNECT SPECTRUM ANALYZER TO A10J3 AND TUNE TO 365 MHz WITH 1 MHz/cm SCAN WIDTH. THERE SHOULD BE A SIGNAL GREATER THAN −15 dBm. THIS SIGNAL MOVES FROM 151 TO 370 MHz IN APPROXIMATELY 1 MHz STEPS AS THE 1 MHz DIGIT IS SEQUENCED FROM 0 TO 9
NO
YES
R R A6 OR W20
CONNECT SPECTRUM ANALYZER TO A7J3 AND TUNE TO 330.5 MHz. THERE SHOULD BE A SIGNAL BETWEEN 330 AND 331 MHz AT A LEVEL OF −13 ±5 dBm
YES
R R A9 W19 OR W22
NOTES
1. THE FREQUENCY SYNTHESIZER AND FREQUENCY COUNTER SHOULD BE DRIVEN FROM A COMMON FREQUENCY STANDARD FOR ACCURATE MEASUREMENTS.
2. R/R MEANS REPAIR OR REPLACE
CONNECT SPECTRUM ANALYZER TO OUTPUT END OF W15. THERE SHOULD BE A SIGNAL AT 4 TO −7 dBm. THIS SIGNAL SHOULD BE A SIGNAL AT 4 TO −7 dBm WHICH MOVES FROM 24 TO 33 MHz AS THE 1 MHz DIGIT IS SEQUENCED FROM 0 TO 9
NO
YES
R R A10A1 or A10A2
CONNECT SPECTRUM ANALYZER TO A6J1. THERE SHOULD BE A SIGNAL AT 4 TO −7 dBm. THIS SIGNAL SHOULD MOVE FROM 24 TO 33 MHz IN APPROXIMATELY 1 MHz STEPS AS THE 1 MHz DIGIT IS SEQUENCED FROM 0 TO 9
NO
YES
R R W15
CONNECT POWER METER TO OUTPUT END OF W10. THERE SHOULD BE A SIGNAL AT A LEVEL OF +2 ±2 dBm
NO
YES
R R W10
CONNECT POWER METER TO OUTPUT END OF W17. THE LEVEL SHOULD BE +7 ±2 dBm
NO
R/R A10A1 OR W17
YES
CONNECT POWER METER TO OUTPUT END OF W18. THE LEVEL SHOULD BE −5 ±2 dBm
NO
YES
R R A7
CONNECT POWER METER TO A10J10. THE LEVEL SHOULD BE −5 ±2 dBm
YES
R R W25, W18 OR 75 MHz JUMPER IN PLUG-IN UNIT
CHECK LOGIC INPUTS TO A6 IN ACCORDANCE WITH CHART BELOW
NO
DEFECTIVE INTERCONNECTING WIRING. CHECK WIRING FROM A6P13, P6E TO A7P1, P6E THROUGH PMI CONNECTOR [illegible] SWITCHES ON A10A1. REPAIR AS REQUIRED
YES
R R A6
CONNECT SPECTRUM ANALYZER TO OUTPUT END OF W16. THERE SHOULD BE A SIGNAL AT +7 ±2 dBm WHICH SWITCHES FROM 24 TO 33 MHz IN APPROXIMATELY 1-MHz STEPS AS THE 1 MHz DIGIT IS SEQUENCED FROM 0 TO 9 AS SHOWN IN CHART BELOW
NO
YES
R R A6 OR W16
CONNECT POWER METER TO OUTPUT END OF W14. THERE SHOULD BE A SIGNAL AT A LEVEL OF 0 dBm OR GREATER
NO
YES
R R W14 OR A5A3
REMOVE COVER ON A10. CONNECT SPECTRUM ANALYZER TO OUTPUT OF A10A5 AT E7. THERE SHOULD BE A SIGNAL BETWEEN 1 AND 5 MHz AT A LEVEL −8 ±2 dBm, WHEN AS THE 1 MHz DIGIT IS SWITCHED FROM 0 TO 4 AND 6 TO 9. WHEN THE 1 MHz DIGIT IS AT 5, A dc CURRENT COMES OUT OF A10A5 AT E7
NO
YES
R R A10A6
CHECK LOGIC CONTROL LINES A10FL7, A10FL10 AS SHOWN IN CHART
NO
YES
R R A10A5
CHECK LOGIC WIRING AND FR[illegible] SWITCH ON A10A1. REPAIR AS REQUIRED

1 MHz LOGIC	1-MHz LOGIC	1-MHz LOGIC	1-MHz LOGIC	A6 OSCILLATOR FREQUENCY	COMB FREQUENCY A10A5-E7	1 MHz SWITCH SETTING
A6FL3	A6FL4	A6FL5	A6FL6			
A10FL7	A10FL8	A10FL9	A10FL10			
0	0	0	0	24 MHz	5 MHz	8
1	0	0	0	25 MHz	4 MHz	1
0	1	0	0	26 MHz	3 MHz	2
1	1	0	0	27 MHz	2 MHz	3
0	0	1	0	28 MHz	1 MHz	4
1	0	1	0	29 MHz	DC	5
0	1	1	0	30 MHz	1 MHz	6
1	1	1	0	31 MHz	2 MHz	7
0	0	0	1	32 MHz	3 MHz	8
1	0	0	1	33 MHz	4 MHz	9

Figure 4-6. Frequency Extender, Troubleshooting Chart

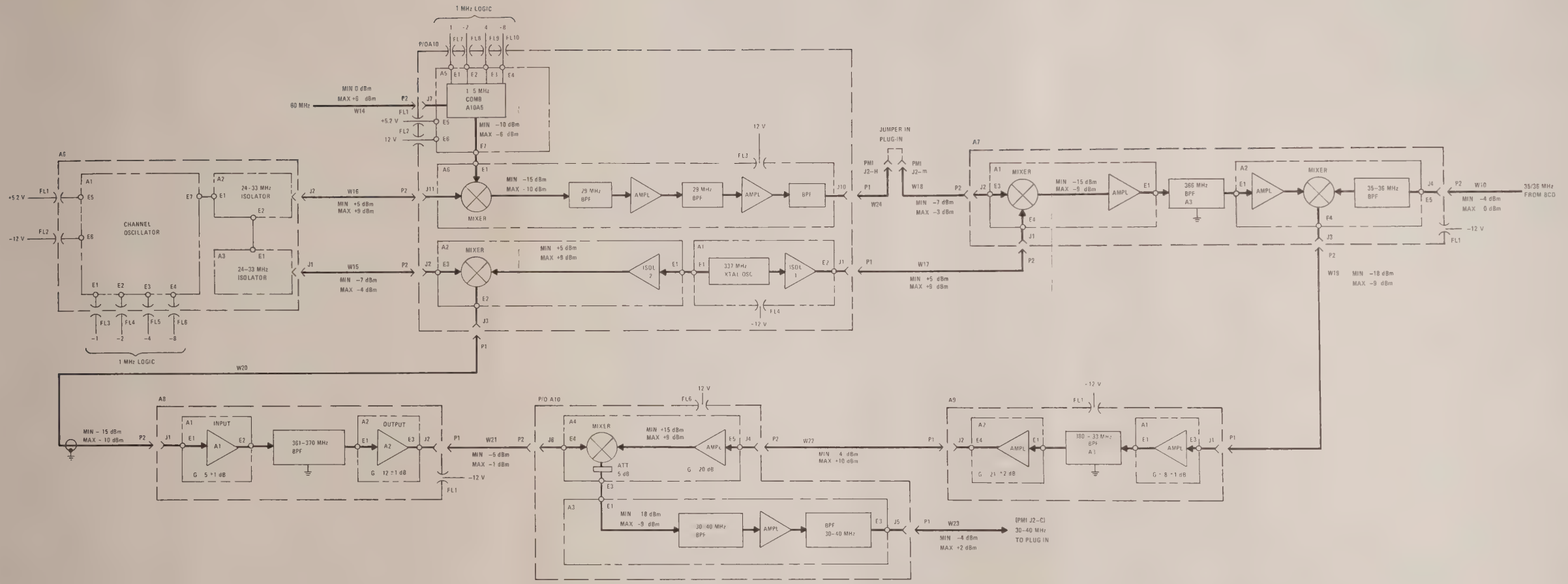


Figure 4-7. Frequency Extender, Servicing Block Diagram

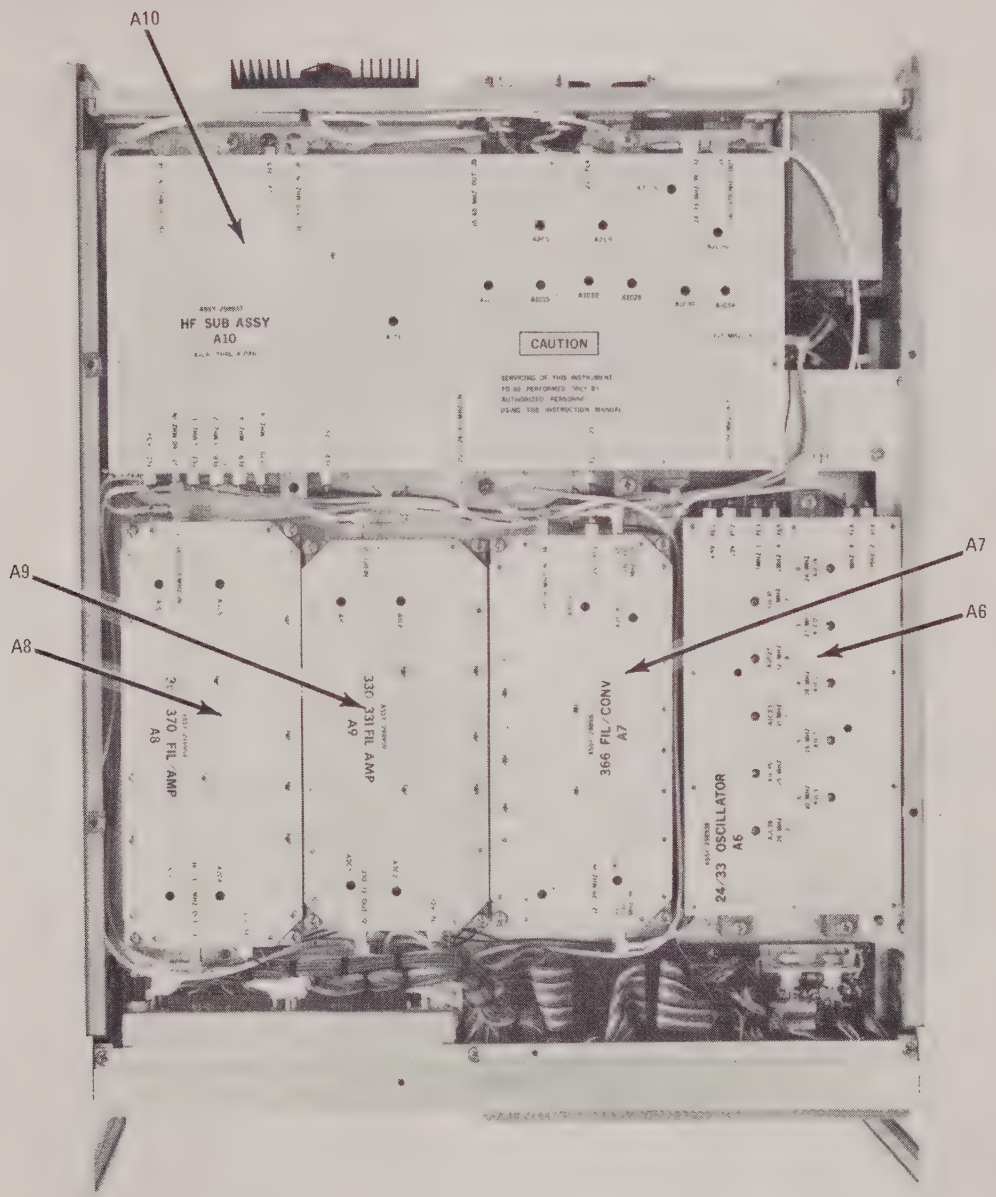
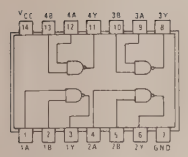
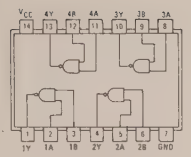


Figure 4-8. Frequency Extender, Subassembly Locations


SN7400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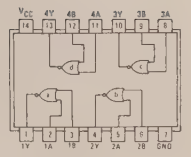
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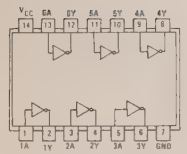
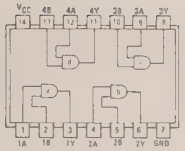

SN7404/SN74S04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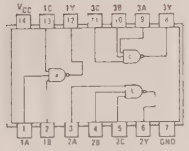
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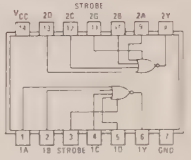
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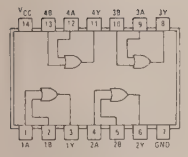
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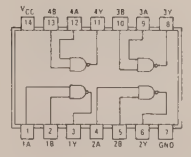
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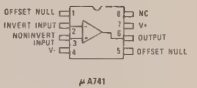
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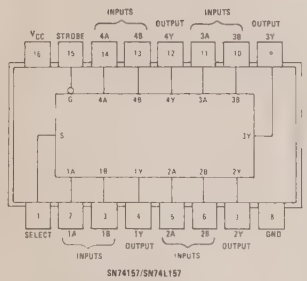
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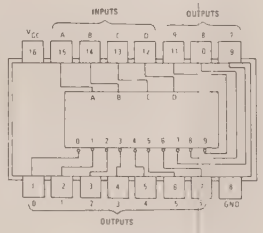

SN7442A

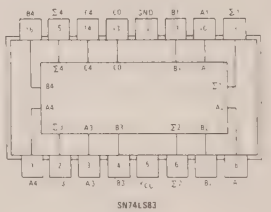

SN74LS83

Figure 4-9. Integrated Circuits

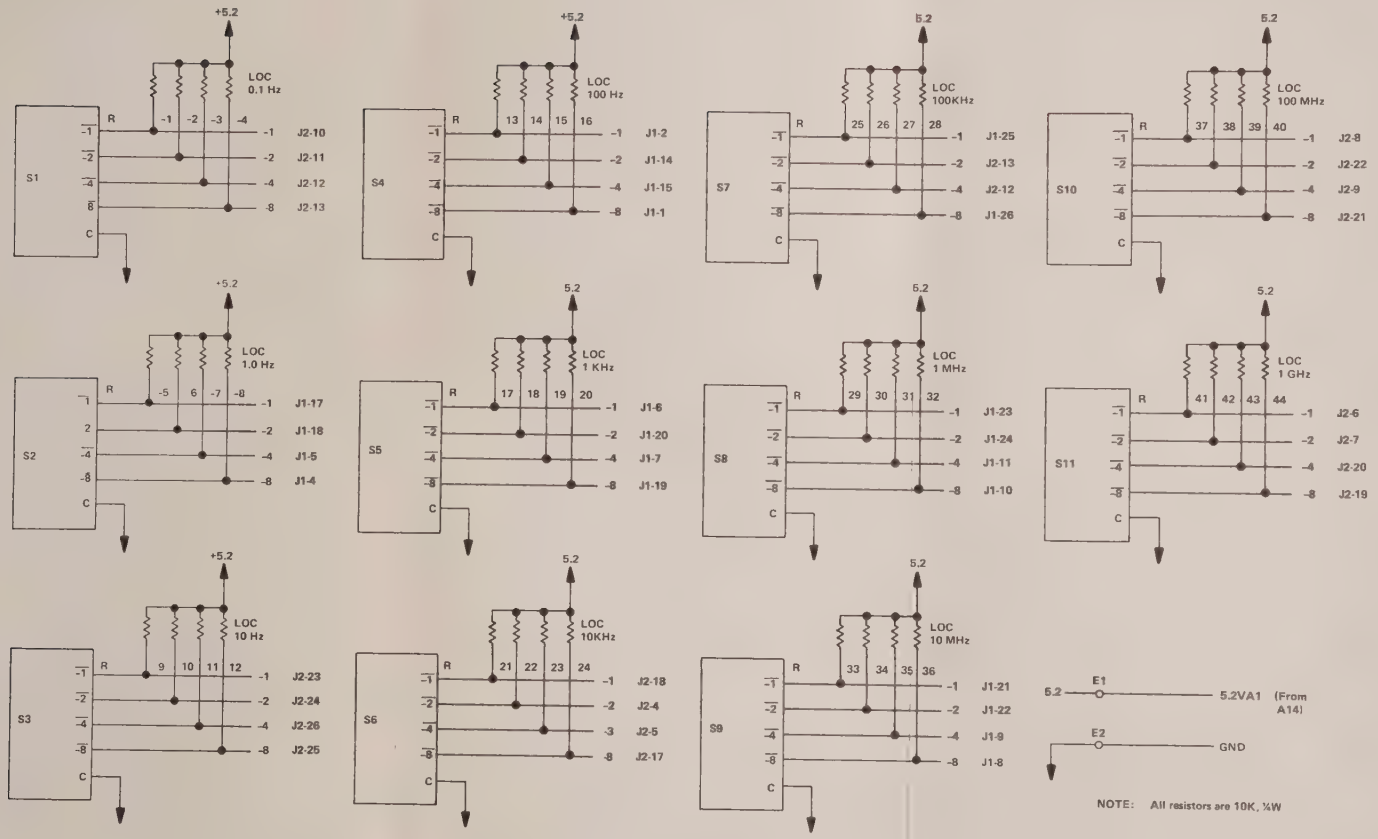


Figure 4-9A. Frequency Select Switch A1A1, Schematic Diagram

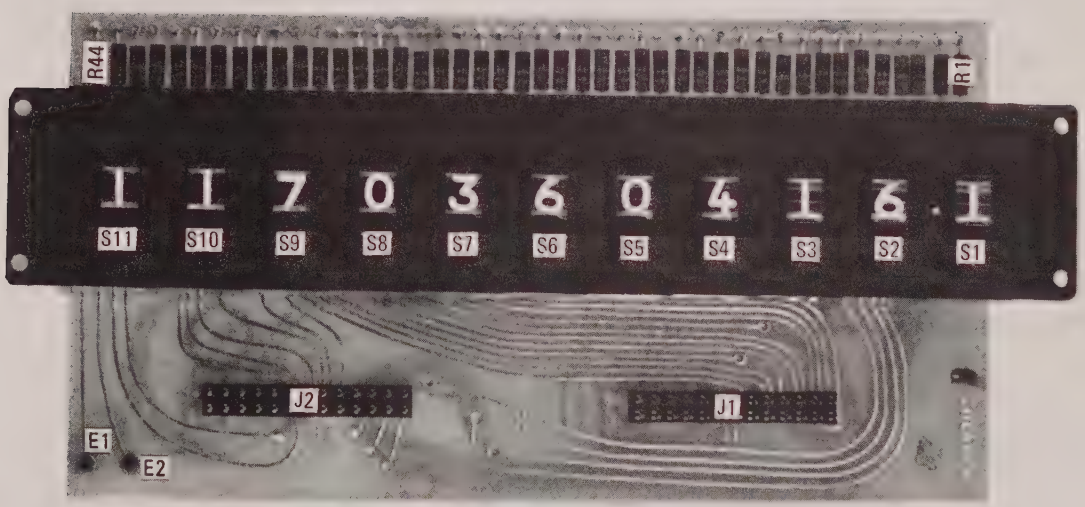


Figure 4-9B. **Frequency Select** Switch A1A1, Component Locations

therefore, the following paragraphs describe the basic theory of a BCD decade. The details of how each module differs will be discussed in later paragraphs under the separate modules.

4-31. Figure 4-10 shows the basic block diagram of all BCD decades. The function of the decade is to provide 10 discrete frequency outputs controlled by a BCD logic code. Given an input frequency of 35.0 MHz and the two comb line frequencies of 64 MHz and 65 MHz, the output frequency will be between 35.0 and 35.9 MHz, depending on the BCD code. If the BCD code is a 3, the output will be 35.3 MHz.

4-32. To understand the operation of the decade, trace a signal through the block diagram of any BCD decade. A starting frequency is chosen at 35 MHz and all RF switches are shown in their 0 position; in other words, a BCD 0 is programmed. In the BCD-1 mixer, a 35-MHz input signal mixes with the 65-MHz LO signal to form a 30-MHz product. This 30-MHz product passes through a 28-30 MHz bandpass filter and is applied to a flip-flop operating in a divide-by-two mode. The output of the flip-flop is a 15-MHz signal which is passed through a 14-15 MHz bandpass filter. This 15-MHz signal is applied to the second mixer where it mixes with 64 MHz generating a 49-MHz signal at the IF port. The 49-MHz signal passes through a 49-50 MHz bandpass filter and again into a flip-flop acting as a divide-by-two circuit. The output of this second divider is a signal of 24.5 MHz. This signal passes through a 24.5 to 25.5 MHz band-pass filter and is applied to the third mixer. The 24.5-MHz signal mixes with 65 MHz generating a signal at 40.5 MHz. This in turn passes through a 38.5 to 40.5 MHz band-pass filter and again a divide-by-two flip-flop generating a signal of 20.25 MHz. This signal passes through a 19.25 to 20.25 MHz band-pass filter and becomes the RF signal for a fourth mixer. The 20.25-MHz signal mixes with 64 MHz producing a mixed product at 43.75 MHz. This frequency is divided by 5 and then multiplied by 4 producing a 35-MHz output. Therefore, for a 35-MHz input with all switches in the zero position, a 35-MHz output results. Now, leave the BCD code in the zero position and apply a 36-MHz signal to the input, which is a 1-MHz change on the input frequency. When tracing this signal through, it is found that out of the first mixer 29 MHz appears, and after the frequency divider the signal is 14.5 MHz. Mixing this again with 64 MHz results in a 49.5-MHz signal and after the frequency divider, 24.75 MHz. After the third mixer the signal is 40.25 MHz and after the fourth mixer the signal is 43.825 MHz resulting in 35.1 MHz at the output. From this example, it is seen that 1 MHz change on the input produces 0.1 MHz on the output or an effective division ratio of 10 going through any BCD decade. This is an important fact because the divide by 10 provided 20 dB of improvement in spurs and noise through each decade.

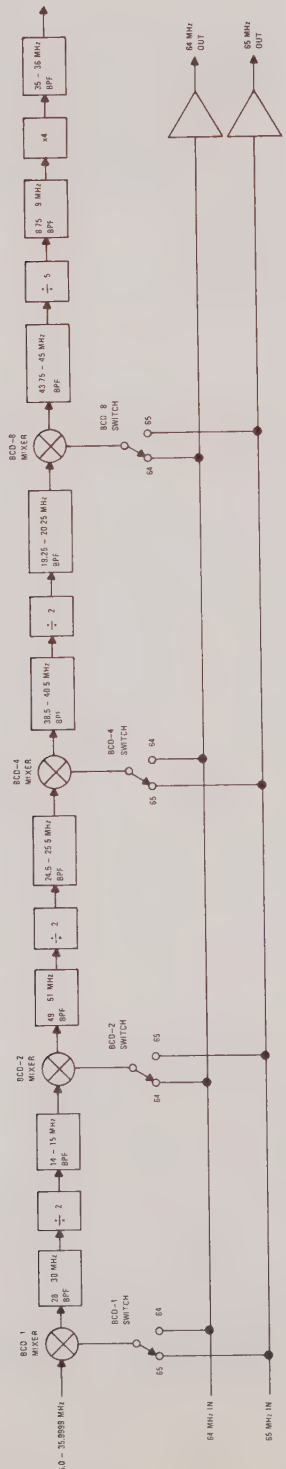


Figure 4-10. BCD Decades Block Diagram

4-33. To further understand the operation, trace through what happens as the BCD-8 switch is set to logic "1". If the BCD-8 switch is thrown to the 1 position, the input of the mixer increases by 1 MHz. The mixer is followed by a multiplication of 0.8 so that the output signal increases in frequency by 0.8 MHz. Thus, this switch has the relative weight of 8. A binary divider separates the BCD-4 mixer from the BCD-8 mixer; in effect a 1-MHz change from the BCD-4 switch is half of the BCD-8 so this switch has a relative weight of 4. In a similar manner, the BCD-2 switch has a relative weight of 2 and the BCD-1 switch has a relative weight of 1. Therefore, each decade, for a 35.0 MHz input, can generate an output of 35.0, 35.1 all the way up to 35.9 directly from a BCD code. In addition, if the BCD code were a 1 for 35.0 MHz input, then the output frequency would be 35.1 MHz. However, if the input frequency was 35.5, then the output would be 35.15. In other words, for a frequency input of 35.X and a BCD code into the decade of N, the output frequency is 35.NX. Therefore, by cascading 6 of these decades it is seen that the output frequency is anywhere from 35 to 35.999999 MHz in 1 Hz steps. Table 4-2 shows the output frequency and output of the four 64/65 MHz switches for each BCD code on the input to the decade. The output frequency assumes a 35.000000 MHz input.

TABLE 4-2
BCD SWITCH CODING

Output Frequency	BCD CODE				BCD-1 Switch	BCD-2 Switch	BCD-4 Switch	BCD-8 Switch
	-1	-2	-4	-8				
35.00	0	0	0	0	65	64	65	64
35.10	1	0	0	0	64	64	65	64
35.20	0	1	0	0	65	65	65	64
35.30	1	1	0	0	64	65	65	64
35.40	0	0	1	0	65	64	64	64
35.50	1	0	1	0	64	64	64	64
35.60	0	1	1	0	65	65	64	64
35.70	1	1	1	0	64	65	64	64
35.80	0	0	0	1	65	64	65	65
35.90	1	0	0	1	64	64	65	65

4-34. LOWER ORDER BCD A2. (See Figure 4-11.)

4-35. Lower order BCD module A2 (figure 4-12) in the mainframe consists of 1-KHz BCD decade board A2A1 and three, 0.1-100 Hz BCD dcade boards, A2A2, A2A3, and A2A4. A fifth position, A2A5, contains a jumper board. This jumper is removed, and another BCD board is inserted when the -001 option is included to provide another decade of resolution.

4-36. 1 KHz DECADE BOARD A2A1 (Figure 4-13).

4-37. The 1 kHz, decade board (figure 4-14) controls the 1-kHz digit in the frequency synthesizer output. The A2A1 output is 35 to 35.999995 MHz depending on the input frequency and BCD code from the 1-kHz logic as previously described. The output level should be greater than -8 dBm. This board contains 64-MHz and 65-MHz buffer amplifiers Q33 and Q34, respectively, which drive the 64 and 65 MHz inputs of A2A2 through A2A5. The level of these signals should be greater than 0 dBm. The remainder of this discussion assumes an input of 35.0000000 MHz.

4-38. The 35-MHz input signal to A2A1 is ac coupled through capacitor C1 to BCD-1 mixer integrated circuit U1-pin 11. The signal at this point is 35 MHz, 0.3V peak-to-peak centered around -7 Vdc. This signal is mixed with 65 MHz from the BCD-1 switch, Q1 through Q7. The 65 MHz enters the U1 mixer at pin 5 at a level of 0.7V peak-to-peak centered around -9.4 Vdc. The 65-MHz and 35-MHz signals are mixed in U1 and the composite signal appears at pin 3 at a level of 0.6V peak-to-peak centered around 2 Vdc. The lower sideband of the 30-MHz composite signal, is selected by 28-30 MHz band-pass filter comprising L1, L2, C9, C10, and C11. The 30 MHz is amplified by driver Q8 to a level of 2 volts peak-to-peak to drive divide-by-two circuit U2. The output of U2 is a 15-MHz square wave at about 2.5V peak-to-peak. This 15.0-MHz square wave is filtered by the 14-15 MHz band-pass filter formed by L4, L5, C13, C14, and C79, and is applied to pin 11 of U3 at a level of 1V peak-to-peak centered around 7.5 Vdc.

4-39. Integrated circuit U3 functions as a BCD-2 mixer. The 64-MHz output of BCD-2 switch Q9 through Q15 is applied to U3 pin 5 at a level of 0.7V peak-to-peak centered on -9.4 Vdc. The 64 MHz mixes with 15 MHz and the composite signal appears at pin 3 at a level of 0.5V peak-to-peak centered around 3.0 Vdc. The lower sideband of this composite signal, 49 MHz, is filtered by 49-51 MHz band-pass filter comprising L6, L7, C22, C23, and C24 and amplified by driver Q16. This signal is applied to a flip-flop which acts as a frequency divider producing 24.5 MHz. The input to U4 pin 13 is a 49-MHz sine wave

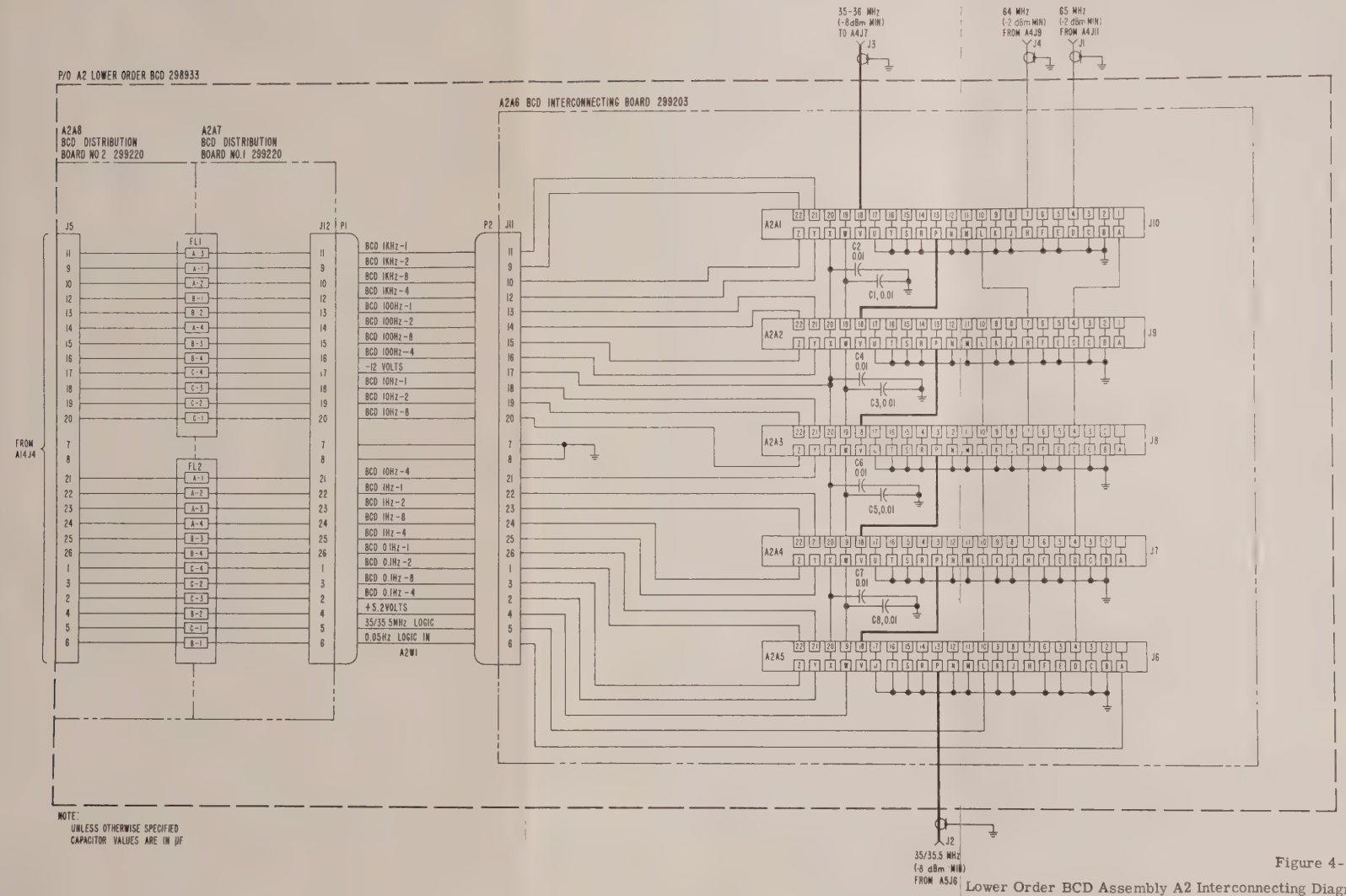


Figure 4-11.
Lower Order BCD Assembly A2 Interconnecting Diagram

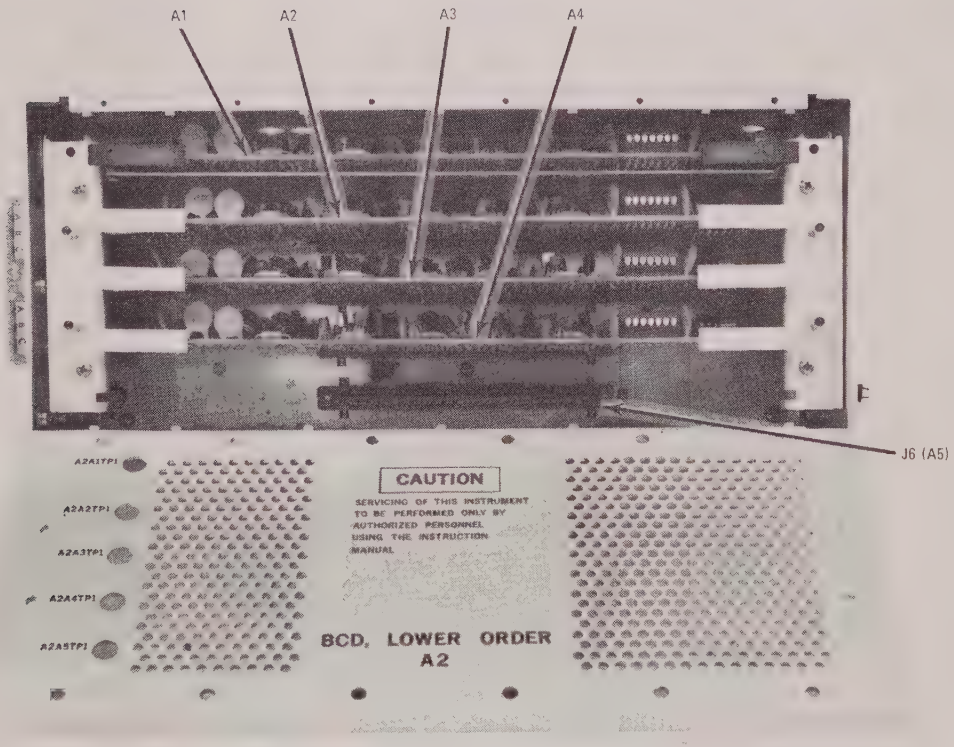


Figure 4-12. Lower Order BCD Assembly A2

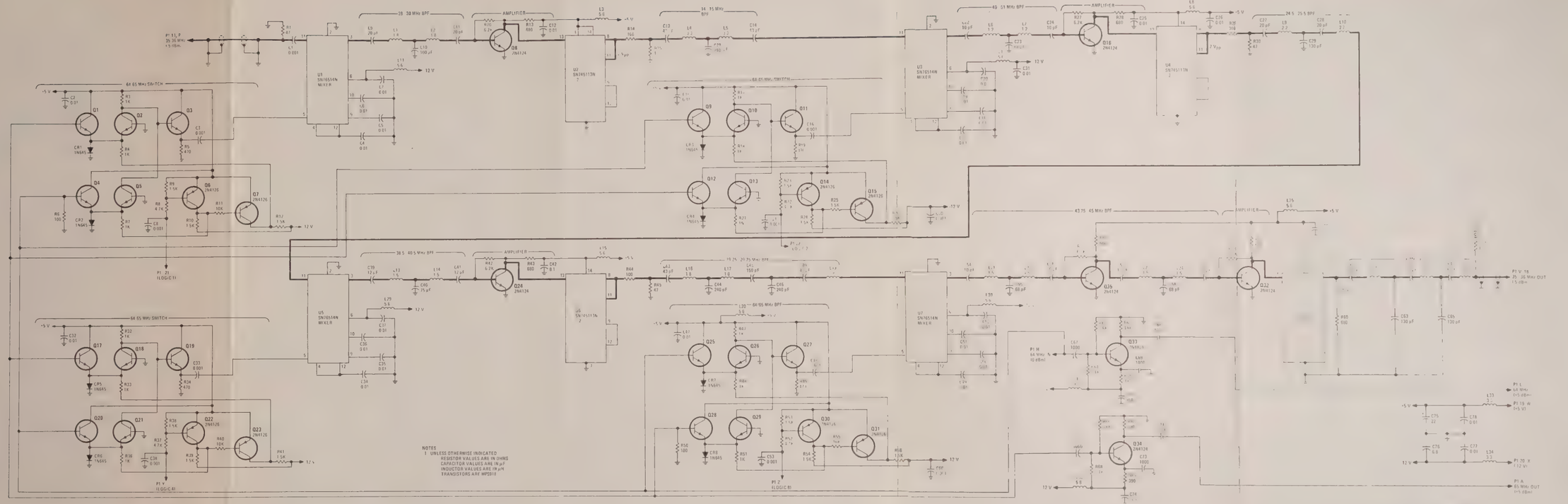


Figure 4-13. 1-kHz Decade Board A2A1, Schematic Diagram

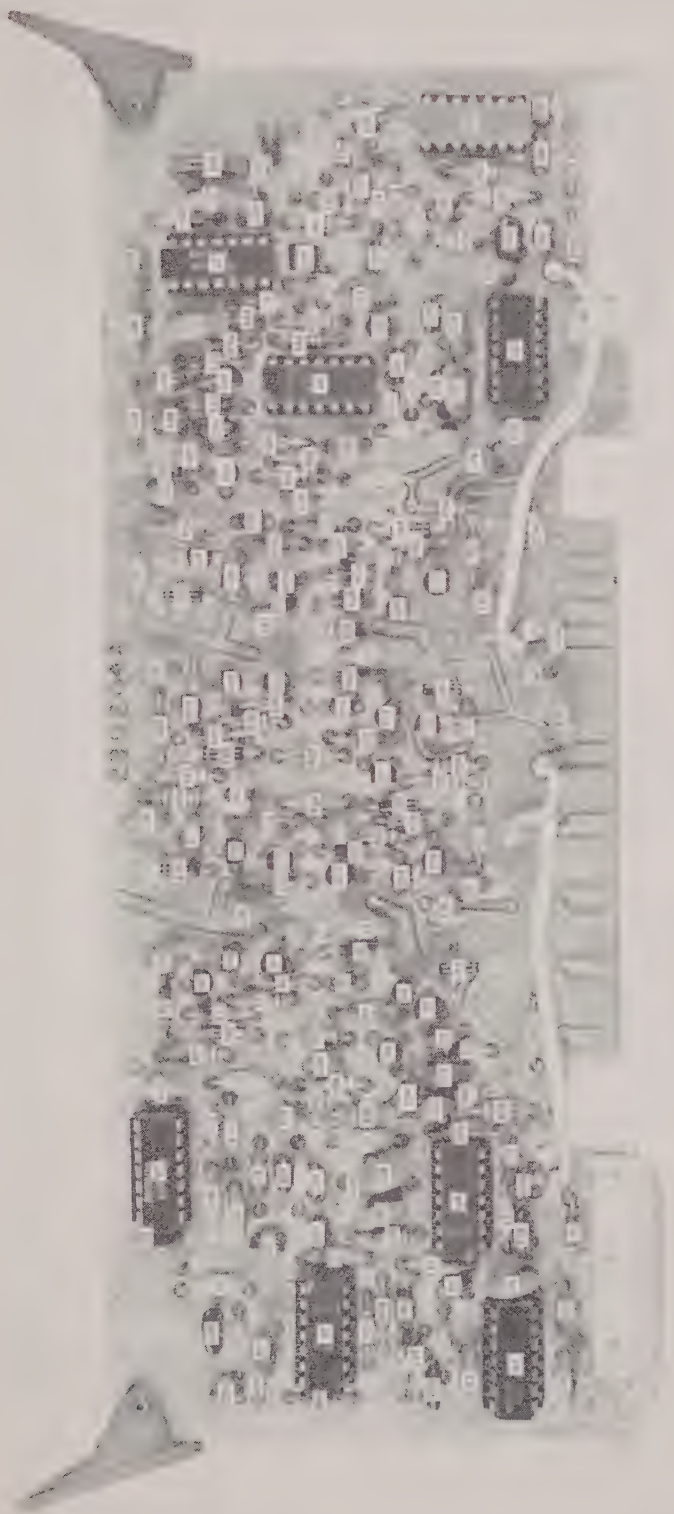


Figure 4-14. 1-kHz Decade Board A2A1, Component Locations

centered at 1 Vdc and approximately 1.5V peak-to-peak. The output of U4 at 24.5 MHz is passed through a 24.5-25.5 MHz band-pass filter formed by L9, L10, C27, C28, and C29.

4-40. The output of the 24.5-25.5 MHz band-pass filter connects to the BCD-4 mixer, U5 pin 11. The signal is 24.5 MHz at a level of 0.6V peak-to-peak centered at -2.4 Vdc. This signal is mixed in U5 with the output of the BCD-4 switch, a 65-MHz signal of 0.7V peak-to-peak centered around -9.4 Vdc. The BCD-4 switch is made up of transistors Q17 through Q23. The output of the U5 mixer appears at pin 3 at a level of 0.7V peak-to-peak centered around -2.3 Vdc. The lower sideband at this composite signal, 40.5 MHz, is selected by a 38.5-40.5 MHz band-pass filter consisting of L13, L14, C39, C40, and C41, amplified by driver Q24, and applied to U6 at a level of 1.5V peak-to-peak at a dc level of 1.0 volt. Flip-flop U6 functions as a frequency divide-by-two circuit producing a 20.25-MHz output signal. This signal is passed through a 19.25 to 20.25 MHz band-pass filter consisting of L16, L17, L19, C43, C44, C45, C46, and C80.

4-41. The filtered 20.25-MHz signal is the RF input to BCD-8 mixer U7. This input is at pin 11 at a level of 0.8 peak-to-peak centered around -6.6 Vdc. It is mixed with the output of the BCD-8 switch formed by transistors Q25 through Q31. The output of this switch at U7 pin 5 is 64 MHz at 0.7V peak-to-peak centered around -9.4 Vdc. This mixes with the 20.25 MHz producing a composite signal at pin 3 of 1.0V peak-to-peak centered around -1.75 Vdc. The lower sideband of this signal, 43.75 MHz, is selected by the 43.75-45 MHz band-pass filter, consisting of L21-L24 and C54-C59. The signal is amplified by Q35 so that the output of the filter is at a sufficient level for the driver.

4-42. The filtered signal is amplified by driver Q32 and applied to U8. Integrated circuit U8 is a frequency divider which divides the 43.75 MHz by 5 producing 8.875 MHz rich in harmonics due to fast rise times on the output of U8. The fourth harmonic of the 8.875 MHz signal is selected by the 35-36 MHz band-pass filter consisting of L26, L27, L28, C61, C62, C63, C64, and C65. The input to U8 at pin 6 is 43.75 MHz at 2V peak-to-peak at a level of 1.25 Vdc. The output of the 35-36 MHz filter is 0.4V peak-to-peak or -5 dBm.

4-43. 0.1 to 100 Hz BCD DECADE BOARDS A2A2 THROUGH A2A5. (See figure 4-15.)

4-44. The 0.1 to 100 Hz BCD decade boards A2A2, A2A3, A2A4, and A2A5 (-001 option) are identical to each other and are similar to A2A1. The only difference between these boards and A2A1, is that these boards do not contain 64 and 65 MHz buffer amplifiers Q33 and Q34. See Figure 4-16 for component location of board A2A2.

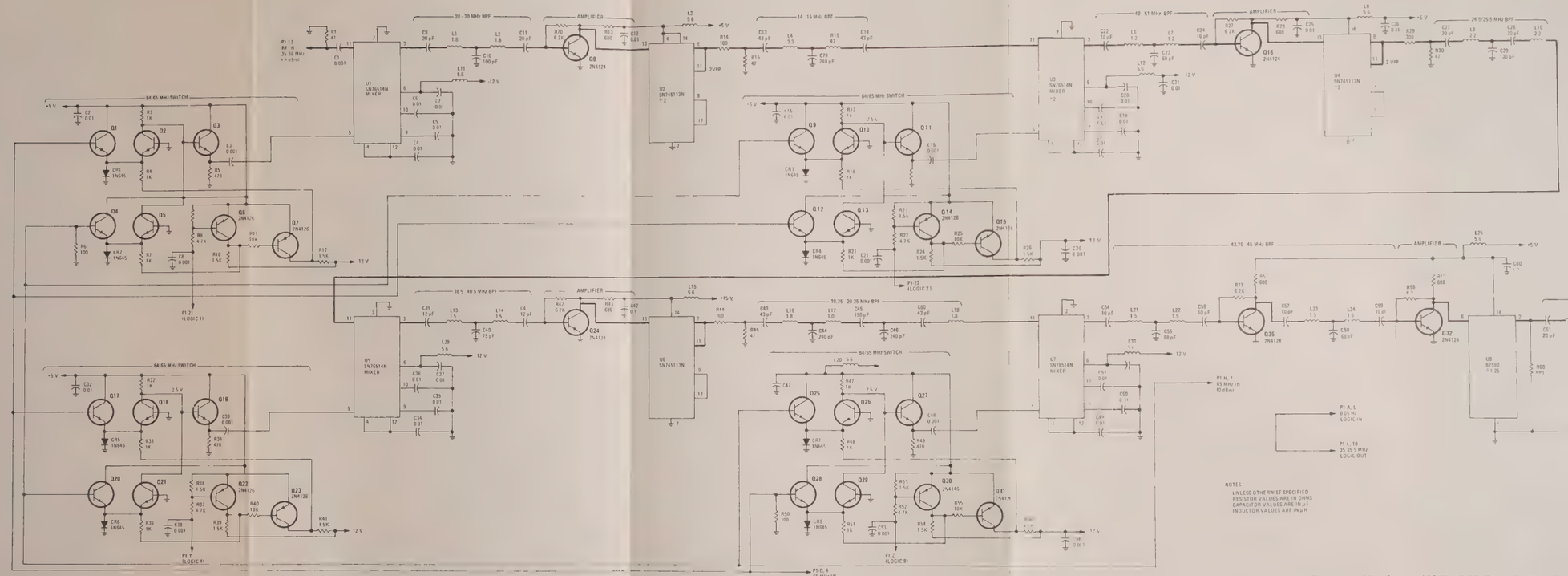


Figure 4-15. 0.1 to 100 Hz BCD Decade Boards A2A2-A2A5, Schematic Diagram

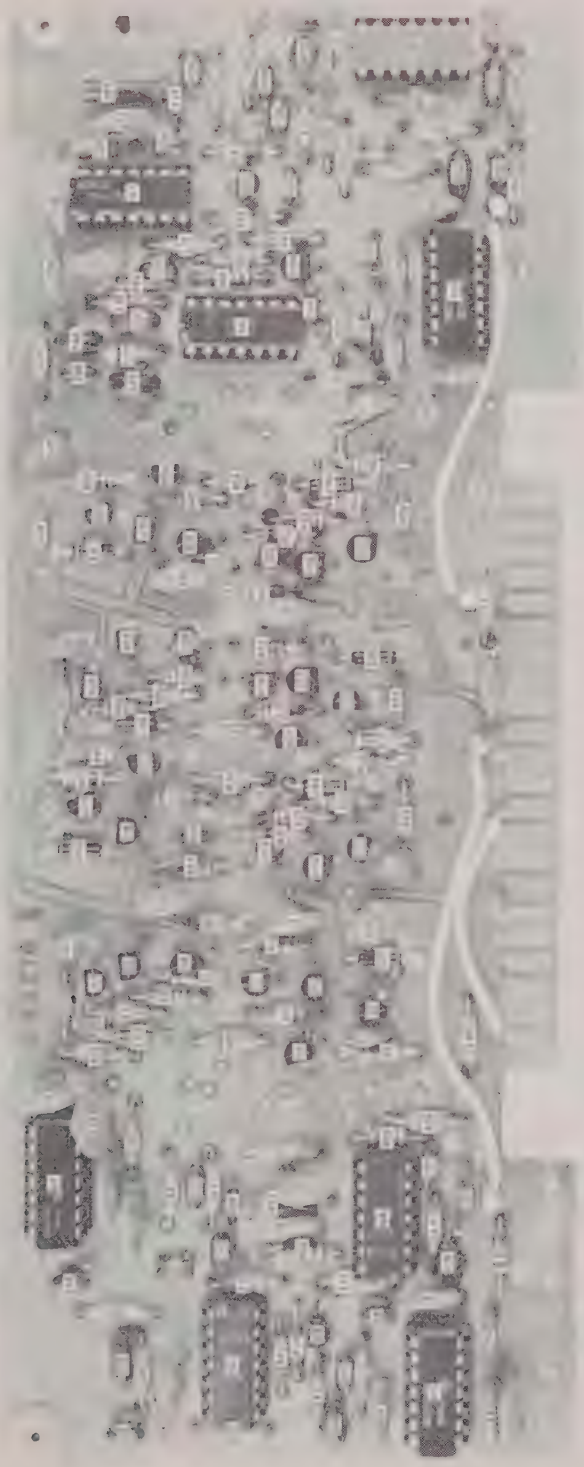


Figure 4-16. 0.1 to 100 Hz BCD Decade Boards A2A2-A2A5, Component Location

4-45. HIGHER ORDER BCD A4.

4-46. Higher order BCD module A4 (Figure 4-17) produces the 100-kHz and 10-kHz decades in the mainframe output. The 10-kHz decade is contained on board A4A11; the 100-kHz decade is contained on boards A4A1 through A4A10.

4-47. BCD-1 BOARD A4A1. (See Figures 4-18 and 4-19.)

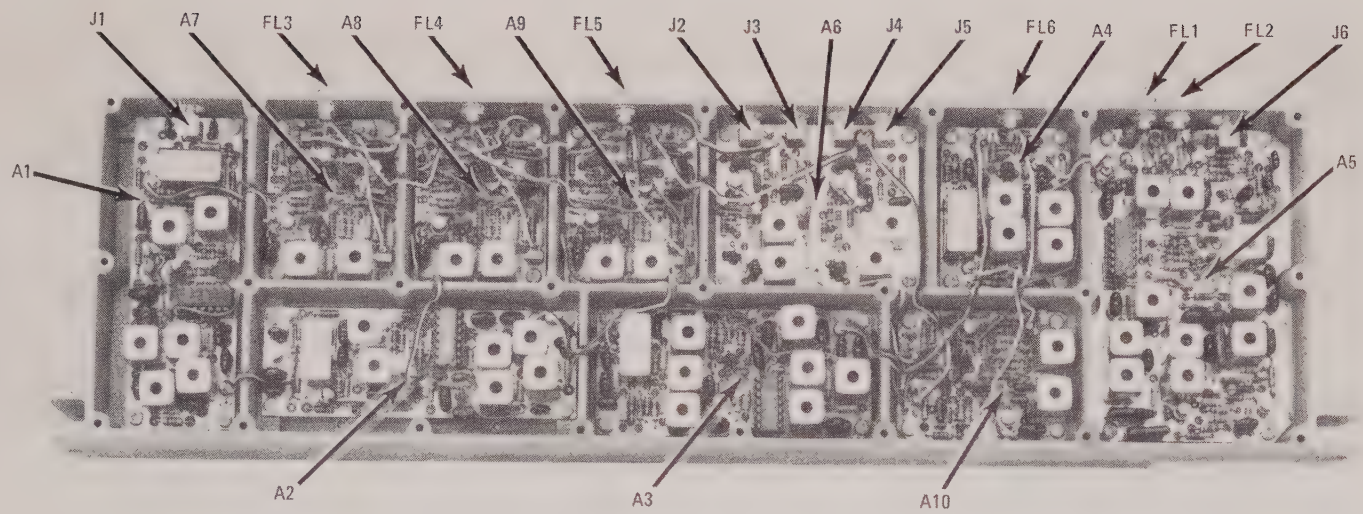
4-48. The input to A4A1 is a 35- to 36-MHz signal at -5 dBm which comes from 10 kHz BCD board A4A11. This signal passes through a low-pass filter (C1, C2, and L1) and a 3-dB pad and is applied to the RF input of mixer M1. The local oscillator for the mixer is 64 or 65 MHz from BCD-1 switch A4A7. The mixed signal is passed through the 28 to 30 MHz band-pass filter consisting of C3 through C6 and L2, L3, and L4 which selects the lower sideband. This signal is amplified in Q1 and applied to U1 which acts as a frequency divide-by-two circuit. The output of U1 is filtered by 14 to 15 MHz band-pass filter C10 through C15 and L7 through L13 which provides a 14-15 MHz signal at E4 at a level of +3 dBm.

4-49. BCD-2 BOARD A4A2. (See Figures 4-18 and 4-20).

4-50. The input to BCD-2 board A4A2 is the 14- to 15-MHz output from A4A1. This signal passes through a low-pass filter and attenuator comprising of C1, C2, C3, L1, L2, R1, R2, and R3 and is applied to mixer M1 at a level of -5 dBm. This signal is mixed with 64 or 65 MHz from BCD-2 switch A4A8. The lower order sideband of the mixer is selected by the 49- to 51-MHz band-pass filter consisting of C4 through C7, and L3 through L5. This signal is amplified in Q1 and applied to U1 which acts as a frequency divider-by-two. The output of U1 is filtered by 24.5 to 25.5 MHz band-pass filter C14 through C19 and L8 through L14. The output of this filter appears at E5 at a level of 0 dBm.

4-51. BCD-4 BOARD A4A3. (See Figures 4-18 and 4-21.)

4-52. The input to BCD-4 board A4A3 is the 24.5- to 25.5-MHz output from A4A2. This signal is passed through a low-pass filter and attenuator comprising of C1, C2, C3, L1, L2, R1, R2, and R3, and applied to mixer M1. This signal is mixed with 64 or 65 MHz from BCD-4 switch A4A9. The lower sideband of this mixer is selected by the 38.5 to 40.5 MHz band-pass filter consisting of C4 through C8 and L3 through L7. This signal is amplified by Q1 and applied to U1 which acts as a frequency divider-by-two circuit. The output of U1 is filtered by 19.25 to 20.25 MHz band-pass filter C16 through C21 and L11 through L17. The output of this filter appears at E3 at a level of +2 dBm.



A55Y 298914
HIGHER ORDER BCD
A4
(A4A1 THRU A4A10)

Figure 4-17. Higher Order BCD Assembly A4

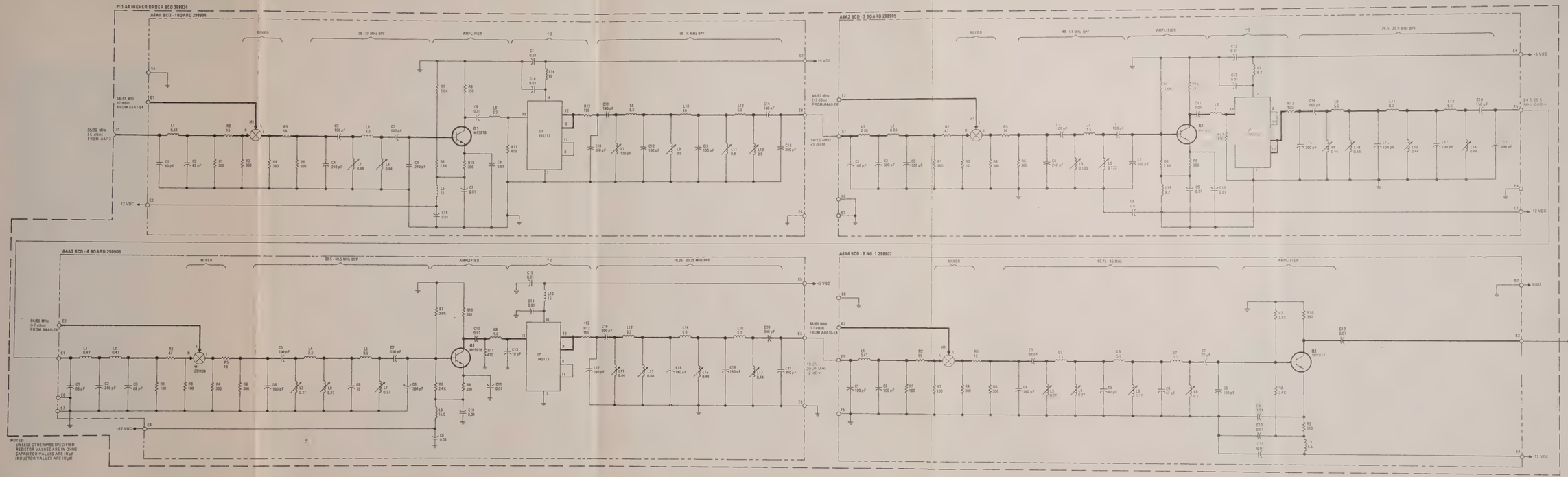


Figure 4-18. BCD Boards A4A1-A4A4 Schematic Diagram

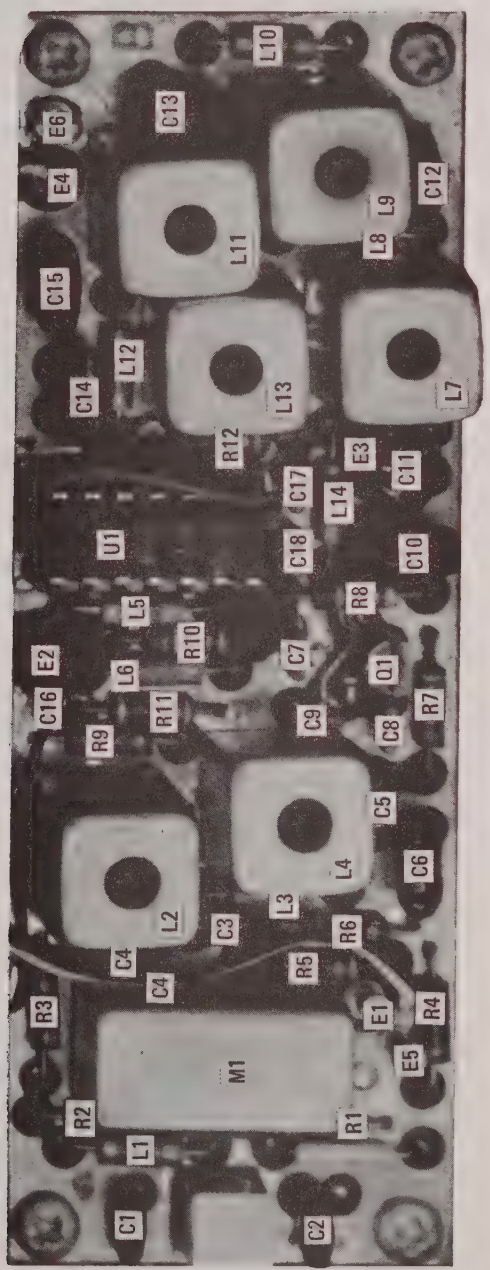


Figure 4-19. BCD-1 Board A4A1 Component Locations

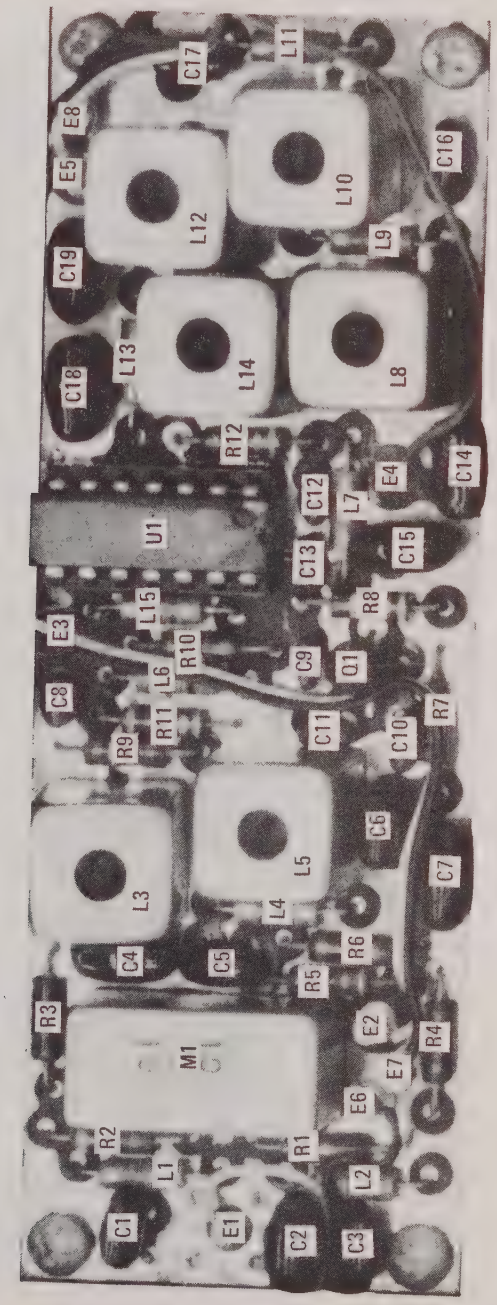


Figure 4-20. BCD-2 Board A4A2 Component Locations

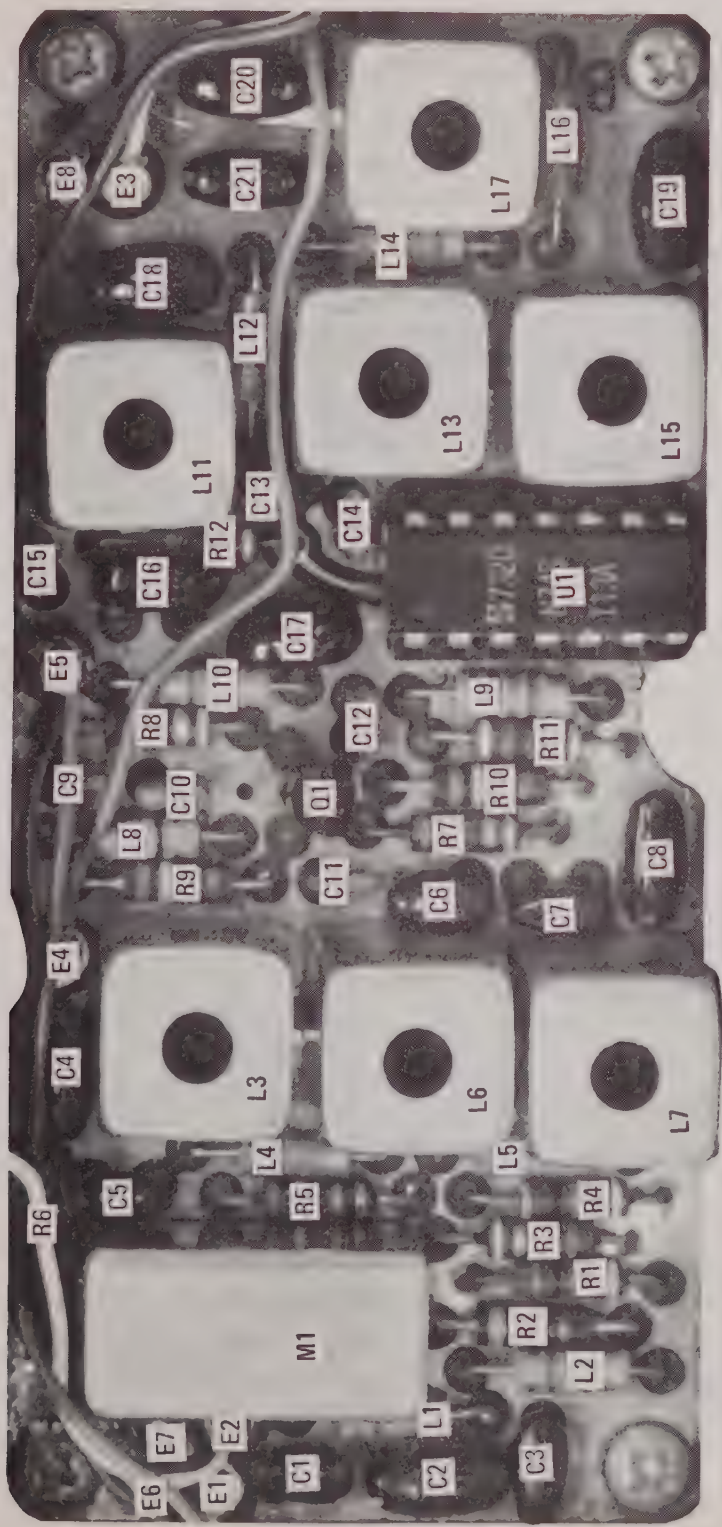


Figure 4-21. BCD-4 Board A4A3 Component Locations

4-53. BCD-8 (NO. 1) BOARD A4A4. (See Figures 4-18 and 4-22.)

4-54. FUNCTIONAL DESCRIPTION (SEE FIGURE 4-18). The 19.25-20.25 MHz signal from A4A3 is applied to A4A4 at E1 and is filtered by low-pass filter C1, C2, L1 and attenuator R1, R2, and R3. The signal is applied to mixer M1 where it mixes with 64 or 65 MHz from BCD-8 switch A4A10. The lower sideband from the mixer is selected by the 43.75 to 45.0 MHz band-pass filter formed by C3 through C8 and L2 through L8. This signal is amplified to a level of -5 dBm and applied to BCD-8 (No. 2) board A4A5.

4-55. BCD-8 (NO. 2) BOARD A4A5. (See Figures 4-23 and 4-24.)

4-56. The 43.75- to 45.0-MHz input signal from A4A4 is filtered by the band-pass filter formed by C1 through C4, and L1-L3 and amplified by Q1 to a level sufficient to drive U1. U1 is a frequency divide-by-5 circuit producing an output equal to one fifth the input or 8.75 to 9.0 MHz. This signal is amplified and passed through a 250 kHz bandwidth filter consisting of C13 through C21 and L7 through L13. The output of this filter is multiplied by 4 in the multiplier section consisting of Q3 and Q4. C27 through C31, L15 through L18, and L25 form a band-pass filter at the 35- to 36-MHz output frequency to reject the 8.75- to 9.0-MHz sidebands of the multiplier. The 35- to 36-MHz signal is amplified in transistor stage Q5 and passed through a low-pass filter (C35, C36, L19) and attenuator (R20, R21, and R22) to produce an output signal about -2 dBm. This signal is the final output of the mainframe.

4-57. BUFFER AMPLIFIER A4A6. (See Figures 4-25 and 4-26.)

4-58. The 64- and 65-MHz inputs at J2 and J4 are amplified by transistor stages Q1 and Q2, respectively. The output of Q1 is filtered by a 64-MHz filter consisting of C4 through C7 and L3 through L5 and connects to the 64-MHz input of 10 KHz BCD board A4A11 through a 3-dB attenuator comprising R7, R8, and R9. The output of Q2 is filtered by a 65-MHz filter consisting of C13 through C16 and L9 through L11 and passed through a 3-dB attenuator comprising R16, R17, and R18. This signal becomes the 65-MHz input to 10 kHz BCD board A4A11.

4-59. 64/65 MHz SWITCHES A4A7 THROUGH A4A10. (See Figures 4-25 and 4-27.)

4-60. The 64/65 MHz switches (A4A7, A4A8, A4A9, and A4A10) select 64 or 65 MHz for each of the higher order BCD boards A4A1, A4A2, A4A3, and A4A4, respectively. The input level is about 200 mV rms (0 dBm into 50 ohms). The logic input at E3 is a TTL compatible level where a "high" level selects the "B" input at E2 and a "low" level selects the "A" input at E1. When a "low" level is applied at E3, Q7 goes on and

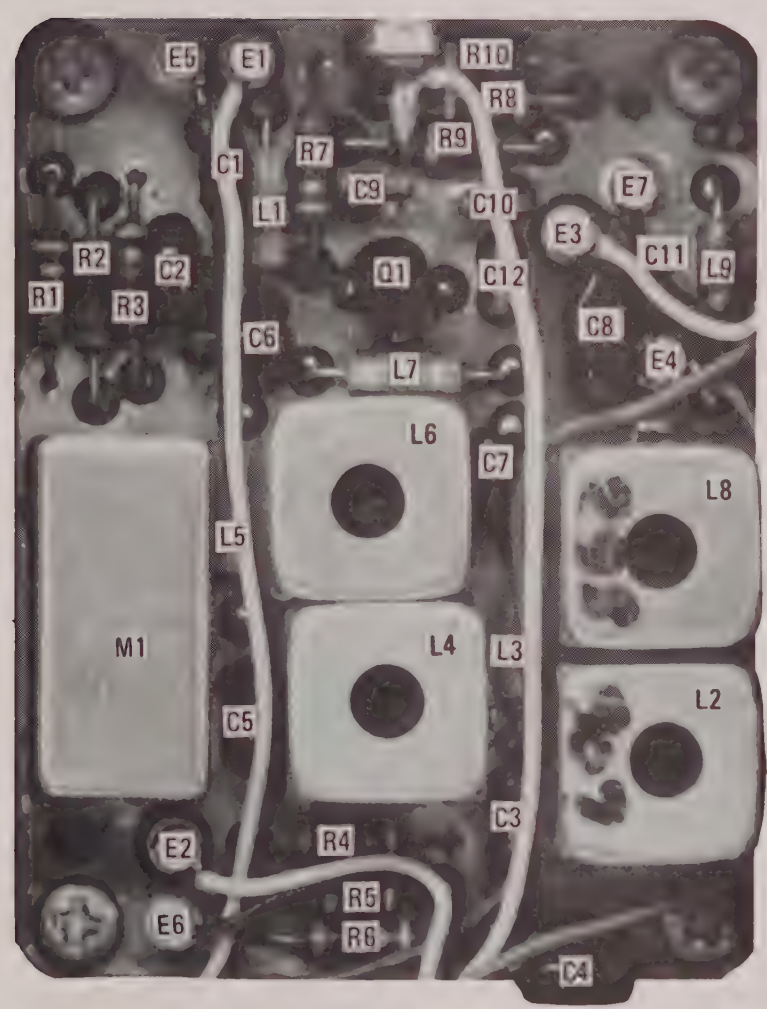
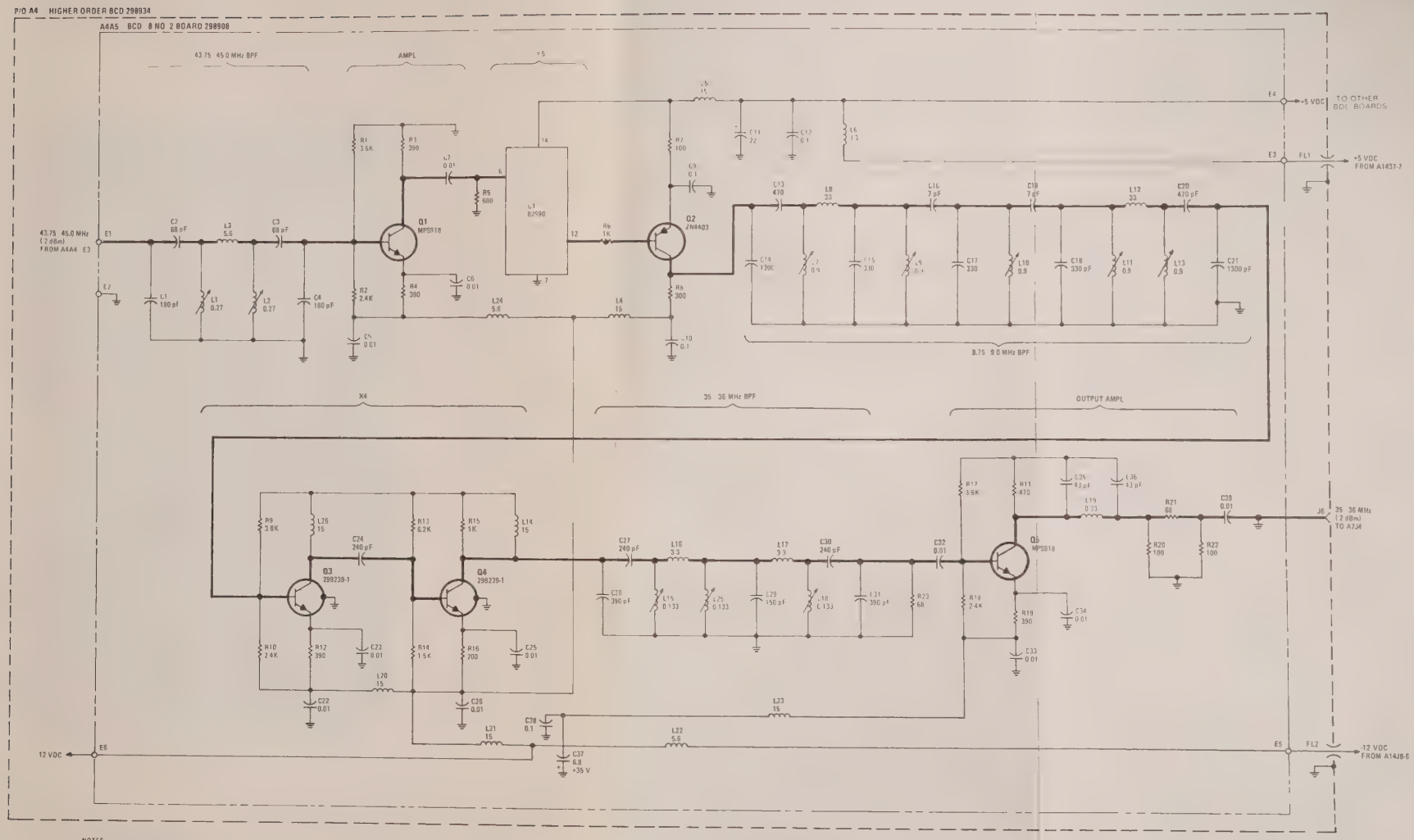


Figure 4-22. BCD-8-1 Board A4A4 Component Locations



NOTES
UNLESS OTHERWISE SPECIFIED
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN μF
INDUCTOR VALUES ARE IN μH

Figure 4-23. BCD-B-2 Board A4A5, Schematic Diagram

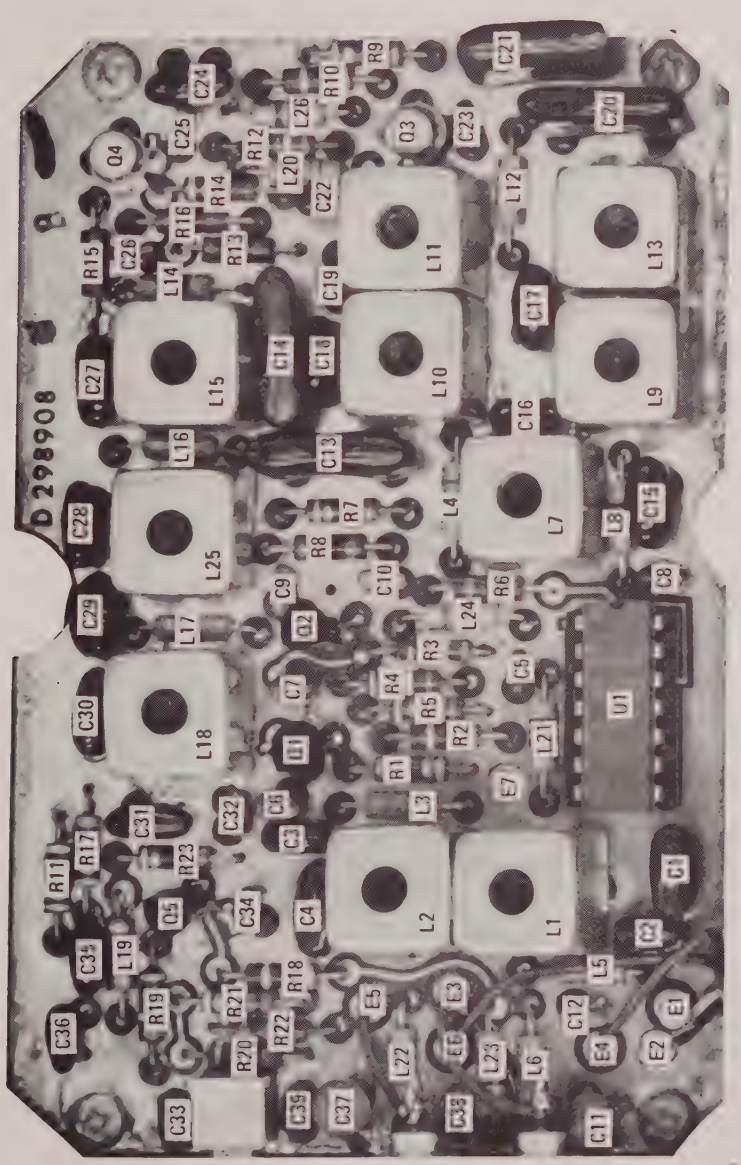


Figure 4-24. BCD-8-2 Board A4A5, Component Locations

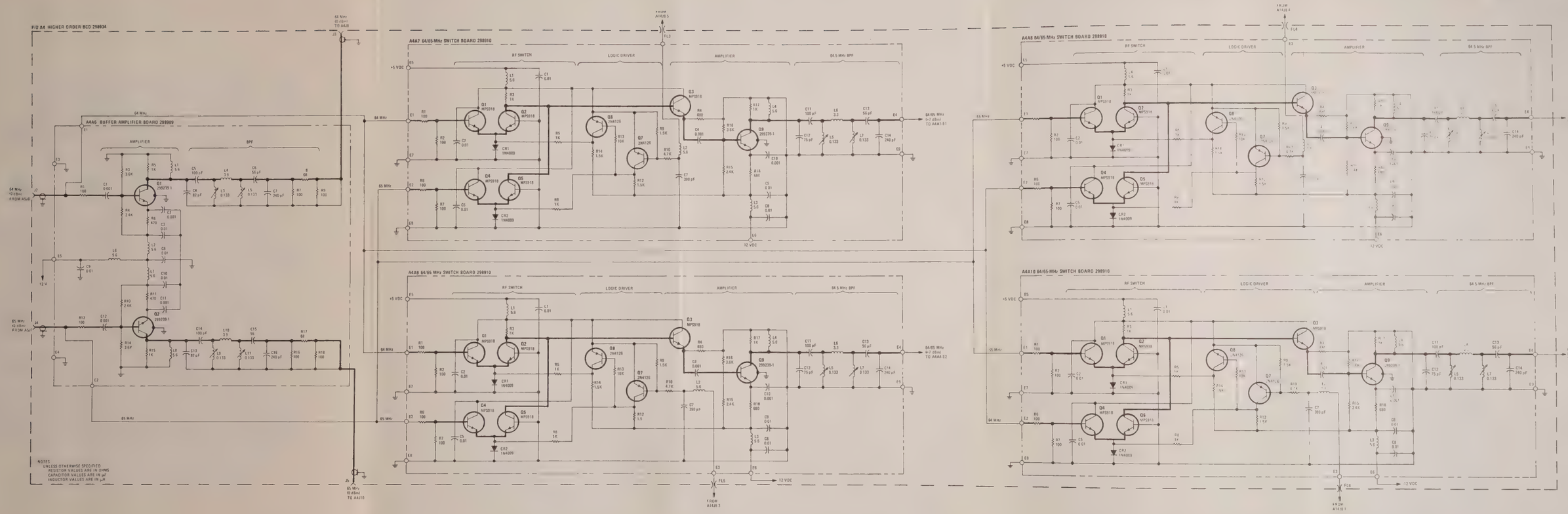


Figure 4-25. Buffer Amplifier A4A6 and 64/65 MHz Switches A4A7-A4A10, Schematic Diagram

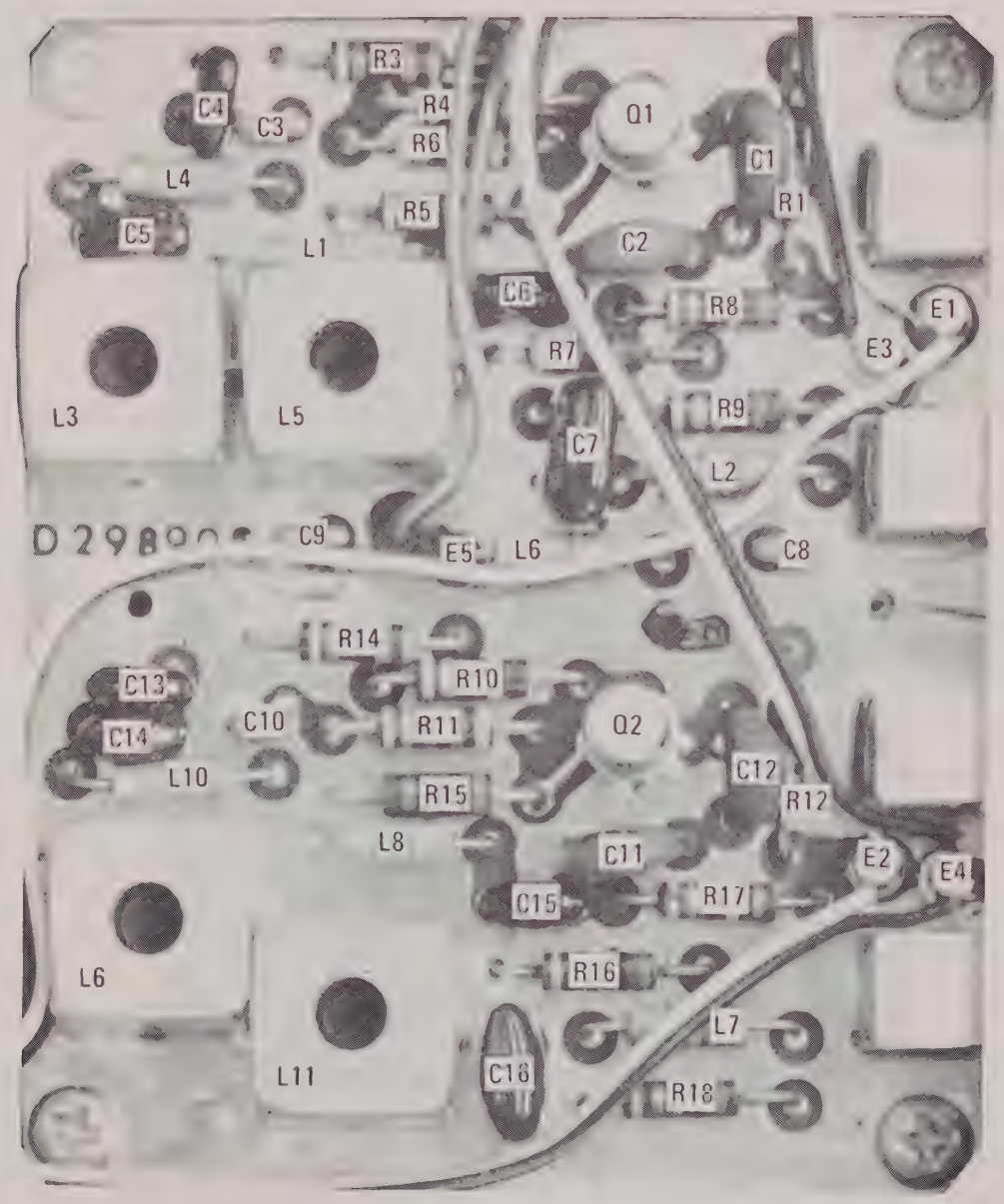


Figure 4-26. Buffer Amplifier A4A6, Component Locations

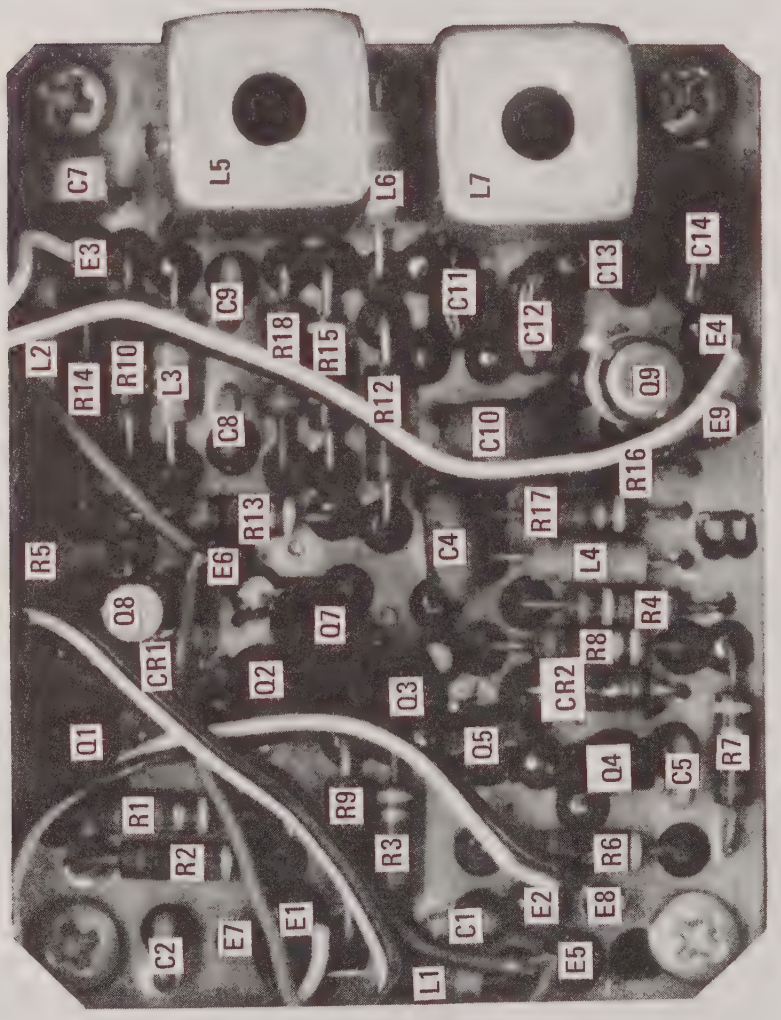


Figure 4-27. 64/65 MHz Switches A4A7-A4A10 Component Locations

turns Q8 off. With Q7 on, CR2 if forward biased and Q4 and Q5 are revise biased thereby isolating the "B" input at E2. With Q8 off, CR1 is biased off and Q1 and Q2 are biased on. Q1 and Q2 amplify the "A" input and apply it to buffer amplifier Q3. The signal from Q3 is further amplified in Q9 and passed through a 64- to 65-MHz band-pass filter consisting of C11 through C14, and L5 through L7. The output of this filter is at a level of +7 dBm and drives the LO input to the mixer. When a "high" level is applied at E3, Q7 goes off and turns Q8 on. With Q8 on, CR1 is biased on, and Q1 and Q2 are biased off thereby isolating the "A" input at E1. With Q7 off, Q4 and Q5 are biased on and CR2 is biased off thereby amplifying the "B" input and connecting it to the buffer Q3 as described above.

4-61. 10 KHz BCD BOARD A4A11. (See Figures 4-28 and 4-29.)

4-62. The input to 10 KHz BCD board A4A11 is a 35- to 36-MHz signal at -5 dBm, from lower order BCD assembly A2. This signal is mixed in the BCD-1 mixer with 64 or 65 MHz as selected by the BCD-1 switch (Q5 through Q11 and Q1). The level out of all the switches measured at the mixer LO input is +7 dBm nominal. The 28 to 30 MHz band-pass filter consisting of L3, L4, C4, C5, and C6 selects the lower sideband of the BCD-1 mixer. This signal is amplified by driver Q2 to a level of 2V peak-to-peak centered at +1.2 V and is applied to U1 pin 13. U1 is a frequency divide-by-2 circuit which has an output of 14 to 15 MHz at 2.5 V peak-to-peak. This signal is filtered by a 14 to 15 MHz band-pass filter consisting of L6, L7, C8, C9, and C10 and applied to the RF input of the BCD-2 mixer.

4-63. BCD-2 mixer M2 mixes the 14- to 15-MHz signal with 64 or 65 MHz from the BCD-2 switch which consists of Q3, and Q12 through Q18. The lower sideband, or difference frequency, is selected by a 49 to 51 MHz band-pass filter consisting of L10, L11, C12, C15, and C16. This filtered signal is amplified by driver Q4 to a level of 1.6V peak-to-peak centered on 1.2V and applied to flip-flop U2 which functions as a frequency divide-by-2 circuit. The output of U2 is 24.5 to 25.5 MHz which is filtered by the band-pass filter formed by C19, C20, C21, L13, and L14.

4-64. BCD-4 mixer M3 heterodynes this signal, which is at a level of 0.6V peak-to-peak, with the output of the BCD-4 switch consisting of Q24 through Q30 and Q19. The lower sideband of the 38.5 to 40.5 MHz, is selected by the band-pass filter formed by C32, C34, C35, L21 and L22. This signal is amplified by transistor driver Q20 and applied to U3 at a level of 2V peak-to-peak centered at 1.1V. Flip-flop U3 functions as a frequency divide-by-two circuit. The output of this circuit is filtered by the 19.25 to

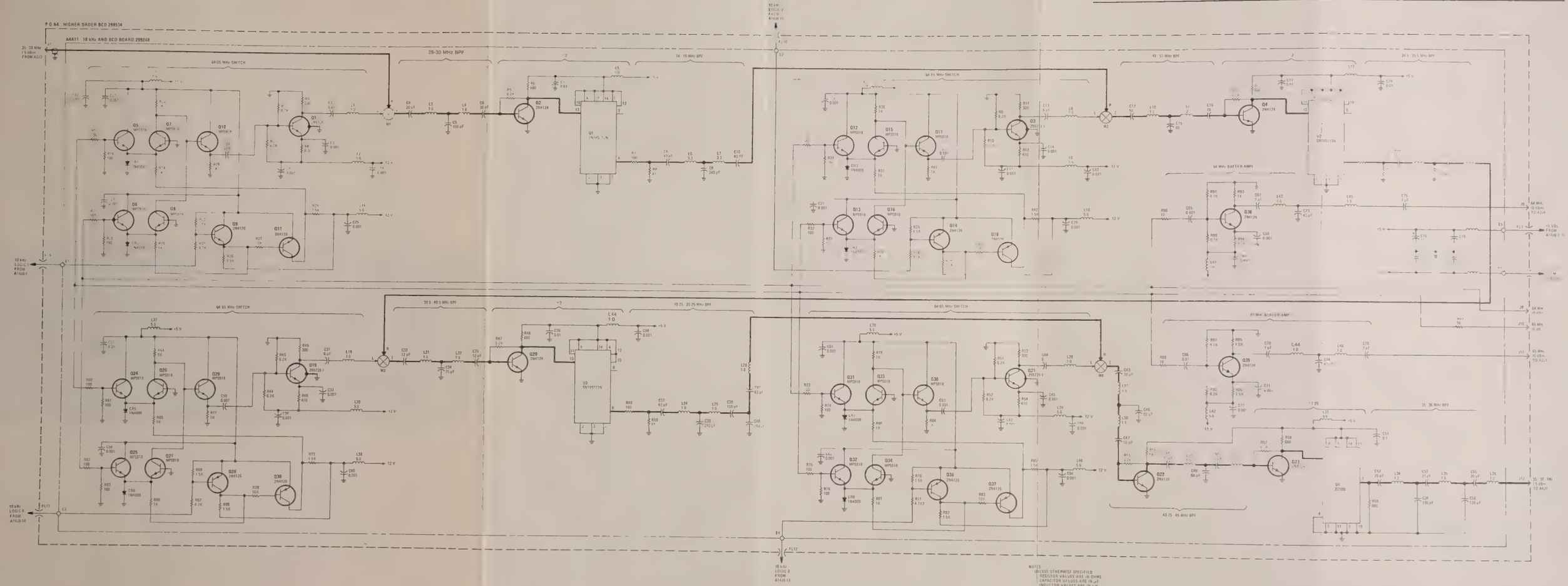

P O A4 HIGHER ORDER BCD 298534
A4A11 10 kHz AND BCD BOARD 299268
28-30 MHz BPF
64/65 MHz SWITCH
14 15 MHz BPF
64 65 MHz SWITCH
45 51 MHz BPF
24 5 25 5 MHz BPF
64 MHz BUFFER AMP
64/65 MHz SWITCH
30 5 40 5 MHz BPF
19 25 20 75 MHz BPF
64/65 MHz SWITCH
65 MHz BUFFER AMP
35 36 MHz BPF
43 75 45 MHz BPF
10 kHz LOGIC A FROM A14J8-1
10 kHz LOGIC A FROM A14J8-14
10 kHz LOGIC B FROM A14J8-13
64 MHz TO A2J4
65 MHz TO A4J1
NOTES
UNLESS OTHERWISE SPECIFIED
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN µF
INDUCTOR VALUES ARE IN µH

Figure 4-28. 10 kHz BCD Board A4A11, Schematic Diagram

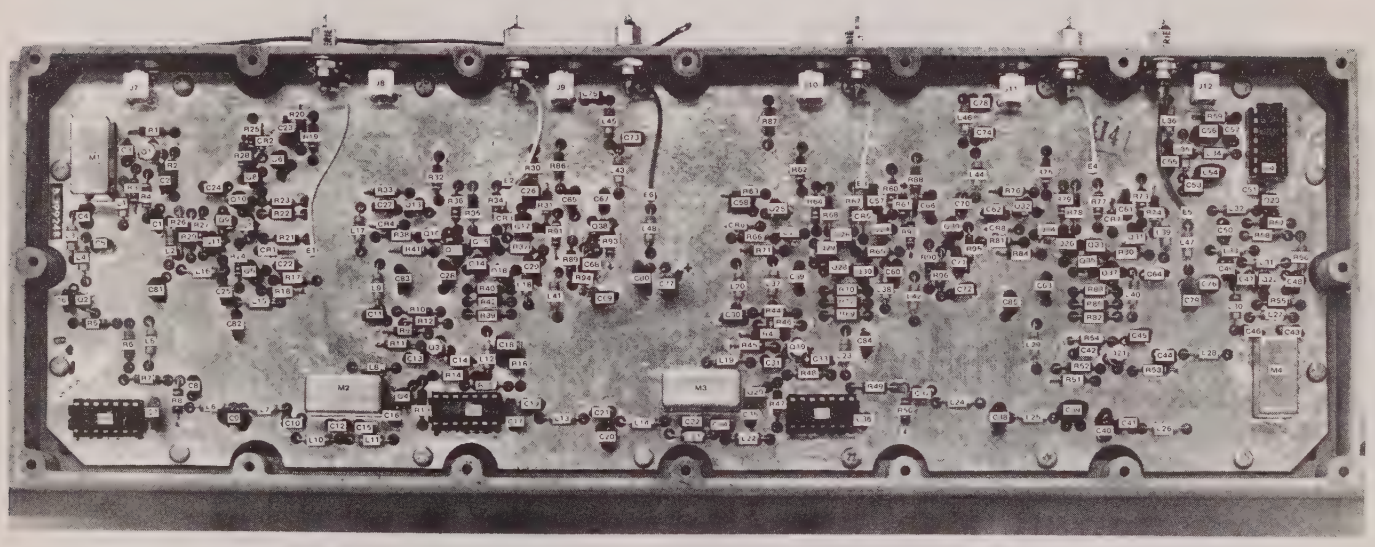


Figure 4-29. 10 kHz BCD Board A4A11, Component Locations

20.25 MHz band-pass filter formed by C37 through C41, L24, L25, and L26. This signal is applied to the BCD-8 mixer at a level of 0.4V peak-to-peak.

4-65. BCD-8 mixer M4 mixes the 19.25 to 20.25 MHz signal with the output of the BCD-8 switch which consists of Q31 through Q37 and Q21. The output of M4 is filtered by C43, C46, C47, L27, and L30 which selects the lower sideband, 43.75 to 45.0 MHz. This signal is amplified in Q22 and filtered by an identical filter C48, C49, C50, L31, and L32 for more rejection. The filtered signal is amplified by transistor driver Q23 and applied to U4 at a level of 1.6V peak-to-peak centered at 1V. U4 is a decade counter connected as a frequency divide-by-five circuit. Due to the fast rise times on the output of U4, the output signal is rich in harmonics. The fourth harmonic is selected by a 35 to 36 MHz filter consisting of C52 through C56, L34, L35, and L36. The output of this filter is the output of the board at a level of -5 dBm.

4-66. The 64- and 65-MHz inputs for the switches come from A4A6. In addition to being applied to the switches, these inputs are applied to buffer amplifiers and band-pass filters to isolate the lower order BCD assembly from the 10-kHz output. The 64-MHz buffer amplifier is Q38 and the filter is L43, L45, C67, C73, and C75. The 65-MHz buffer amplifier is Q39 and the filter is C70, C74, C78, L44 and L46. The output of both of these amplifiers is at 0 dBm.

4-67. FIXED FREQUENCY GENERATOR A5.

4-68. The fixed frequency generator (Figure 4-30) produces all the fixed reference frequencies required by the frequency synthesizer. The output frequencies are 10, 60, 64, 65, and 35 or 35.5 MHz. All of these signals are derived directly from the 5- or 10-MHz input by simple operations of multiplication, division, addition, and subtraction.

4-69. FIXED FREQUENCY INPUT BOARD A5A1. (See Figures 4-31 and 4-32.)

4-70. The input to this board is from the REF IN connector at the rear panel of the frequency synthesizer. The input signal is 5 or 10 MHz at a level of 0 dBm minimum. This signal goes through saturated amplifier Q1 which limits the 10 MHz or produces harmonics of 5 MHz. C4, L1, C6, L2, and C7 form a 10 MHz band-pass filter which selects the correct harmonic (10 MHz) of the input signal. The 10-MHz signal is further amplified by Q2 and filtered by 4-pole band-pass filter L3, L5, L6, and L8. The output of this filter is amplified again and passed through crystal filter Y1 which reduces excess noise on the reference by 20 dB for noise sidebands greater than 500 Hz away from the carrier. The output of this board is 0 dBm into 50 ohms. The 10-MHz signal drives all the other units in the fixed frequency generator.

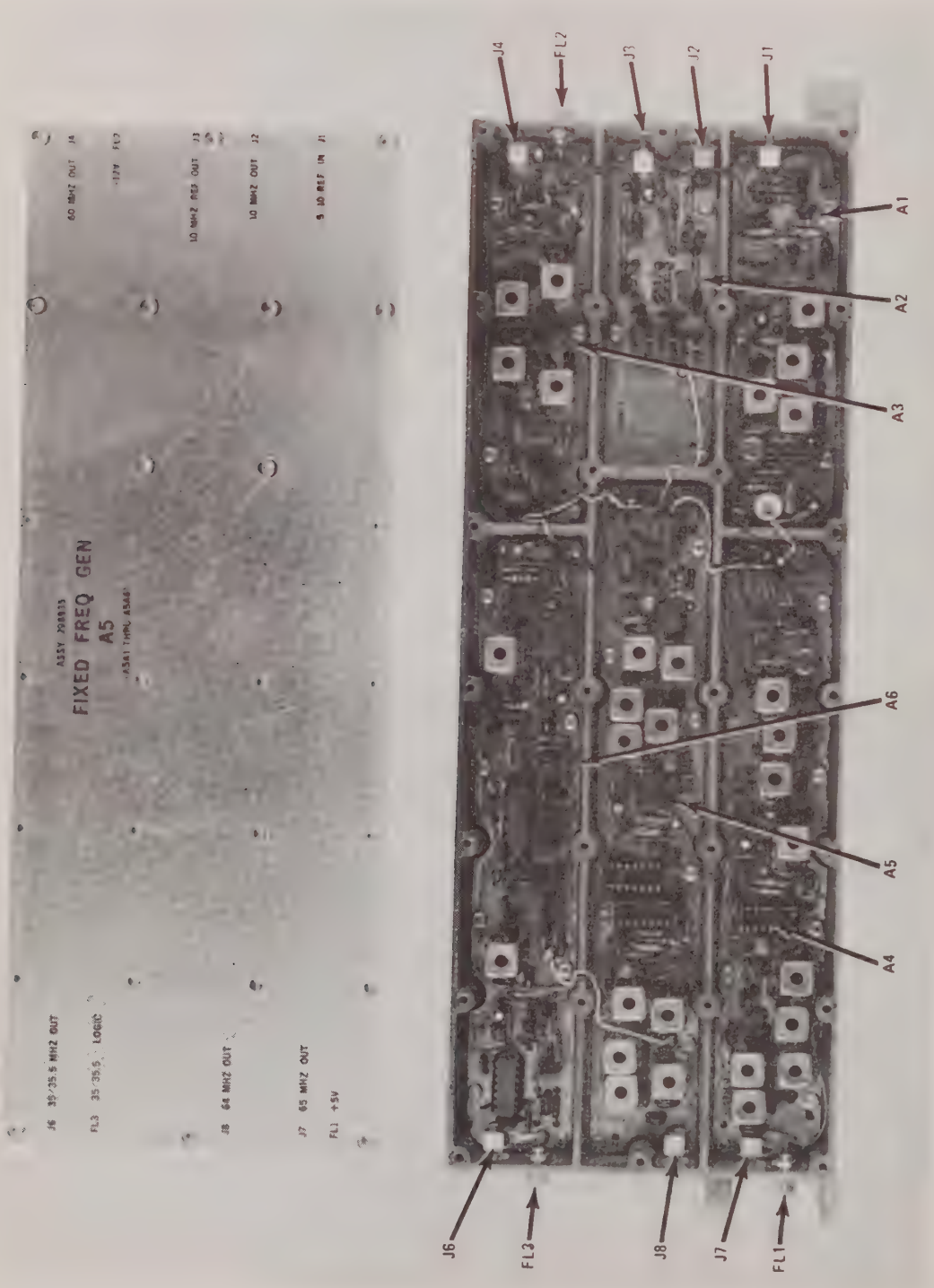


Figure 4-30. Fixed Frequency Generator A5

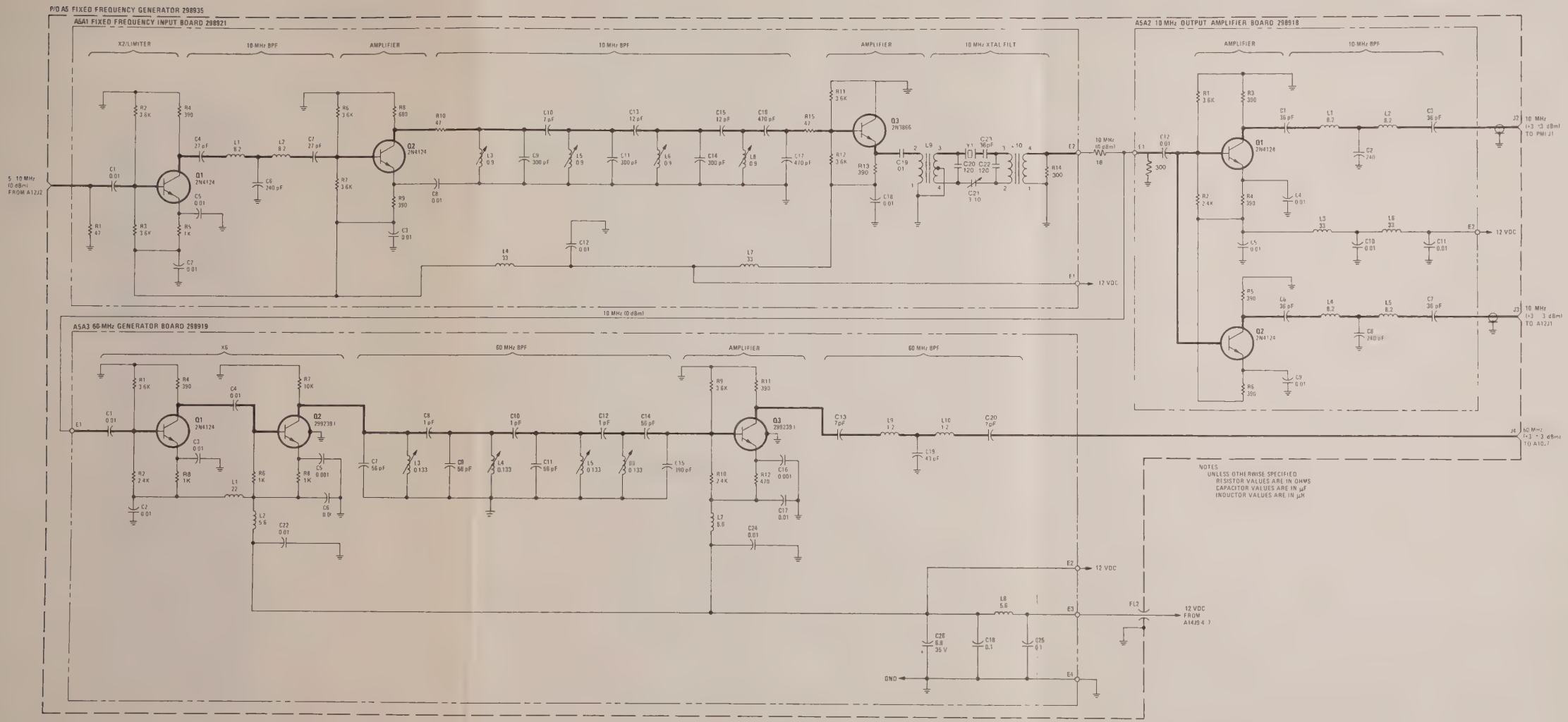


Figure 4-31. Fixed Frequency Input Board A5A1, 10 MHz Output Amplifier A5A2, and 60 MHz Generator A5A3, Schematic Diagram

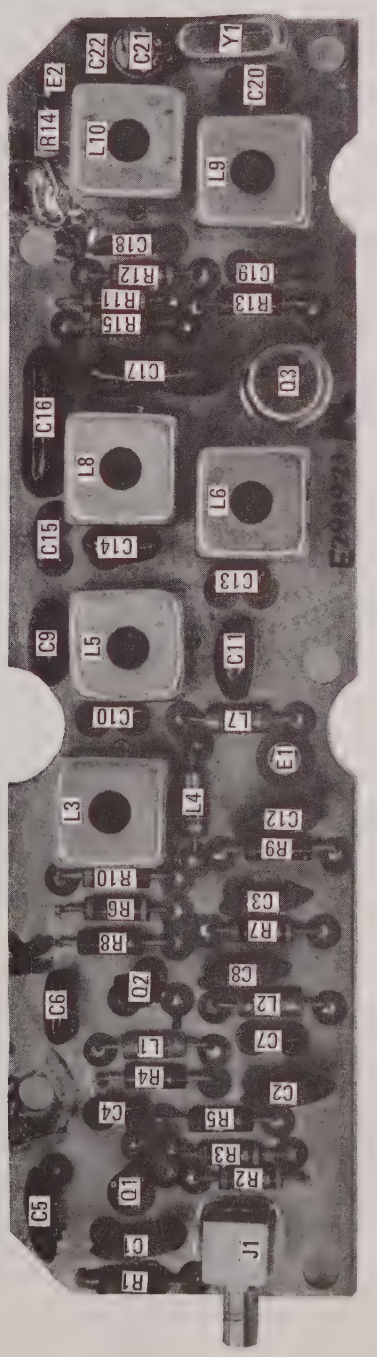


Figure 4-32. Fixed Frequency Input Board A5A1, Component Locations

4-71. 10 MHz OUTPUT AMPLIFIER A5A2. (See Figures 4-31 and 4-33.)

4-72. This printed circuit board buffers the 10-MHz signal. One buffered output at A5J2 provides 10 MHz at +3 dBm for the RF plug-in unit. The other output at A5J3 provides a 10-MHz reference output at +3 dBm at the rear panel of the frequency synthesizes. The board consists of two amplifiers, Q1 and Q2, and two, 10-MHz band-pass filters: L1, L2, C1, C2, and C3; and L4, L5, C6, C7, and C8.

4-73. 60 MHz GENERATOR A5A3. (See Figures 4-31 and 4-34.)

4-74. The 60 MHz generator provides a 60-MHz output at +5 dBm. The 10-MHz signal from fixed frequency Input Board A5A1 is amplified by Q1. Transistor Q2 is a saturated amplifier stage followed by 60-MHz, four-pole band-pass filter L3 through L6. The combination of the saturated amplifier and band-pass filter form a X6 multiplier. The output of the band-pass filter is a 60-MHz signal which is amplified by Q3 and filtered by 60-MHz band-pass filter L9, L10, C13, C19, and C20. The output of A5A3 is a +5 dBm signal at 60 MHz for use in the frequency extender module.

4-75. 65 MHz GENERATOR A5A4. (See Figures 4-35 and 4-36.)

4-76. The input to the 65 MHz generator is 10 MHz from fixed frequency input board A5A1. This signal is amplified by amplifier Q1. Transistor Q2 is a class C amplifier which produces a 10-MHz signal rich in harmonics. The 13th harmonic, 130 MHz, is selected by four-pole band-pass filter L4 through L7 and C8 through C16. The 130-MHz signal is amplified by Q3 which forms a driver stage for U1 - a high speed flip-flop operating as a frequency divide-by-two circuit producing 65 MHz. The 65 MHz is amplified by Q4 and filtered by five-pole band-pass filter L14 through L18 and C24 through C34. The 65-HMz output at 0 dBm minimum provides one of the reference frequencies required for the BCD section.

4-77. 64 MHz GENERATOR A5A5. (See Figures 4-37 and 4-38.)

4-78. The 64 MHz generator starts with 10 MHz from fixed frequency input board A5A1 and amplifies the 10 MHz in Q1. Transistor Q2 is a saturated amplifier stage which produces harmonics of 10 MHz. The eighth harmonic (80 MHz) is selected by five-pole band-pass filter L5 through L9, C5, and C8 through C16. The output of this filter is 80-MHz signal which is amplified by Q3 (part of a driver for U1 and U2). U1 and U2 are Schottky TTL flip-flops connected to form a frequency divide-by-five circuit. The output at U2 pin 6 is a 16-MHz signal rich in harmonics due to the fast rise times of the Schottky TTL logic. L12, L13, C19, C20, and C21 form a band-pass filter selecting the fourth

Figure 4-33. 10 MHz Output Amplifier A5A2, Component Locations

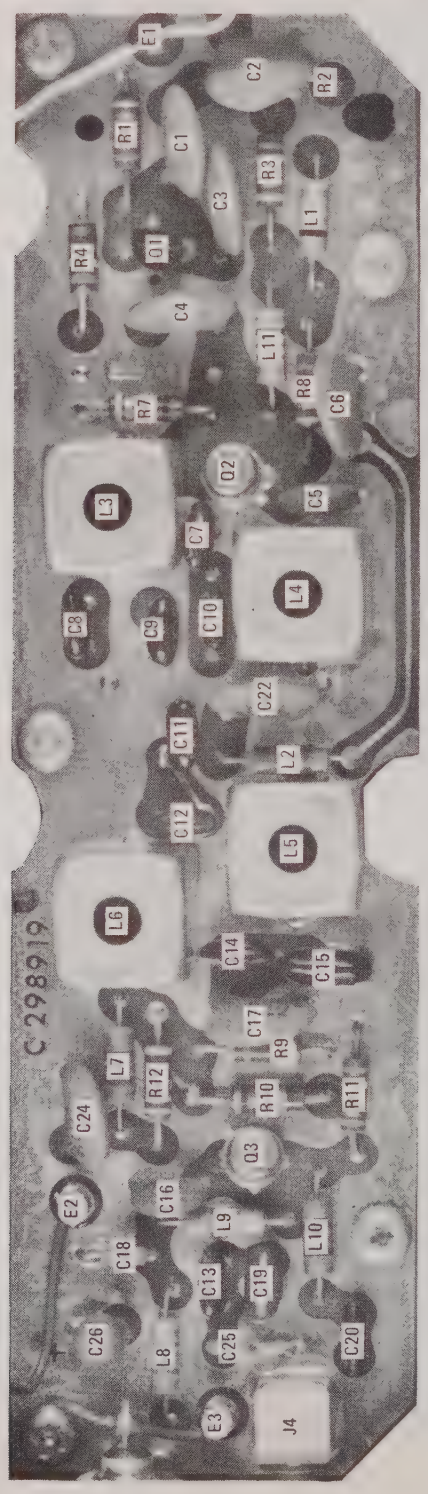


Figure 4-34. 60 MHz Generator A5A3, Component Locations

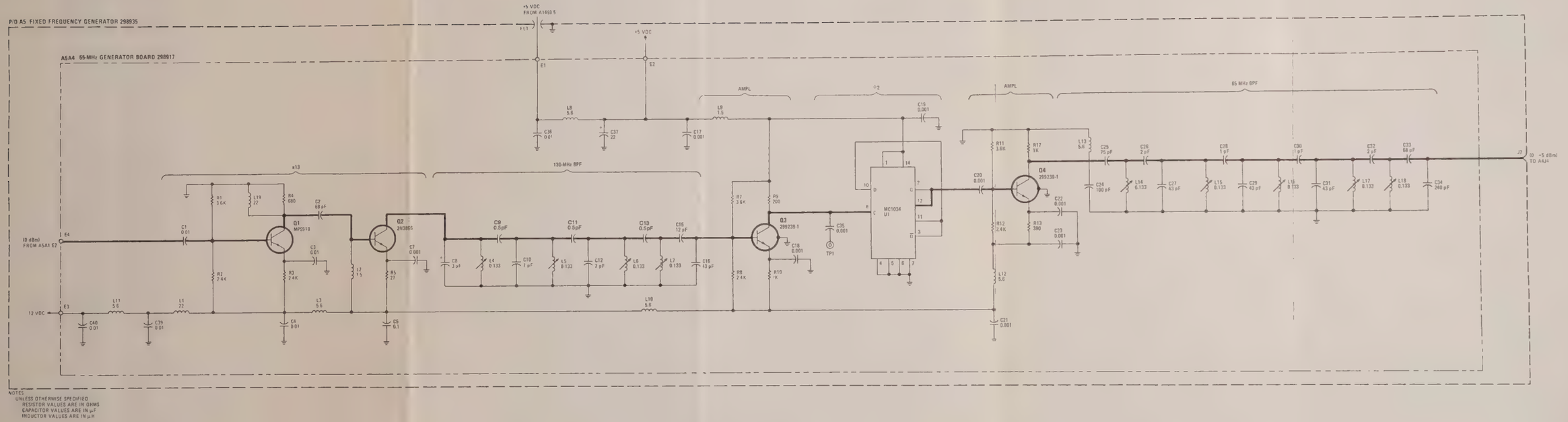


Figure 4-35. 65 MHz Generator A5A4, Schematic Diagram

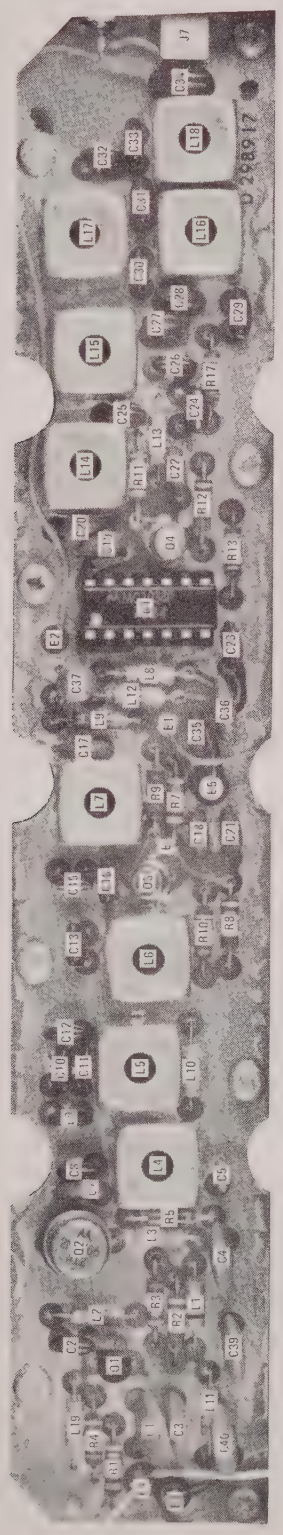


Figure 4-36. 65 MHz Generator A5A4, Component Locations

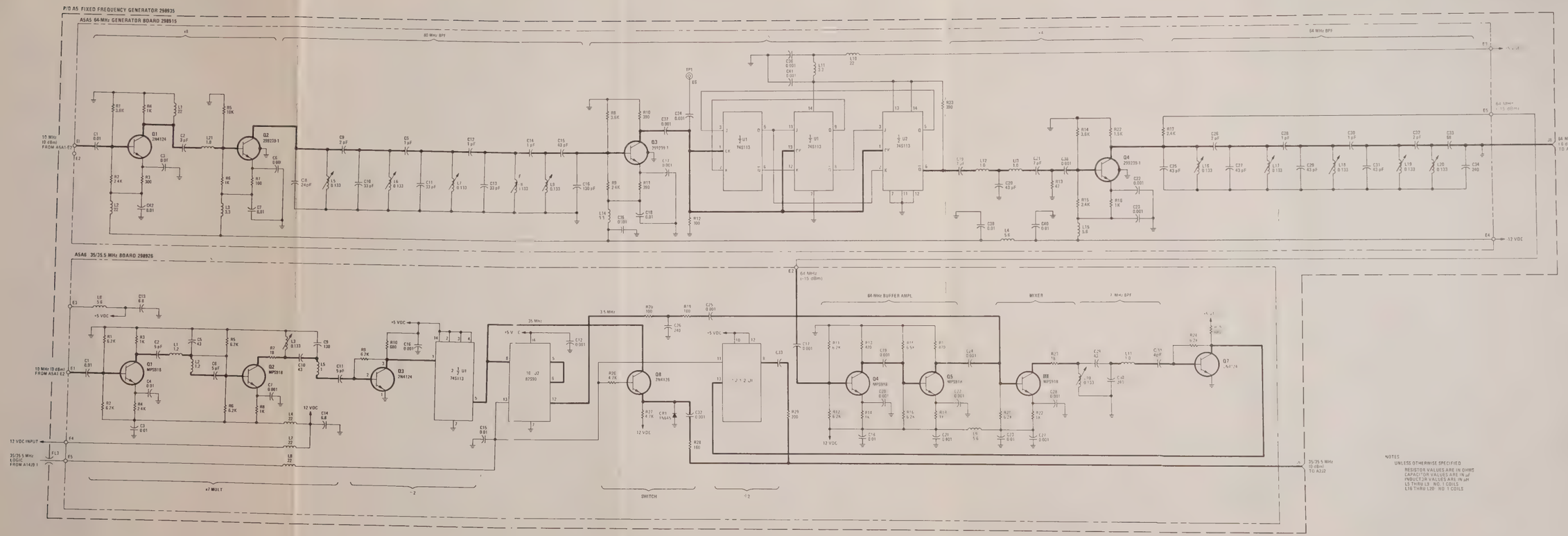


Figure 4-37. 64 MHz Generator A5A5 and 35/35.5 MHz Board A5A6, Schematic Diagram

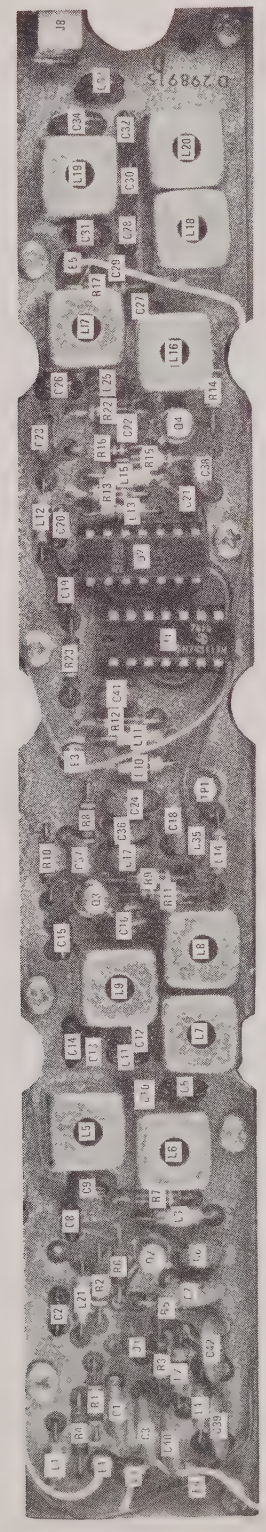


Figure 4-38. 64 MHz Generator A5A5, Component Locations

harmonic (64 MHz) which is amplified by Q4. L16 through L20 and C25 through C34 form a five-pole band-pass filter at 64 MHz which filters out sidebands from the divider. The output of this filter is 64 MHz at 0 dBm minimum which is one of the reference frequencies used in the BCD section.

4-79. 35/35.5 MHz BOARD A5A6. (See Figures 4-37 and 4-39.)

4-80. The third reference frequency required by the BCD section is 35.0 or 35.5 MHz. The output frequency is switched with a TTL compatible command at A5FL3. A logic '0' ($\leq$0.8V) produces 35.0 MHz and a logic '1' ($\geq$2.2V) produces 35.5 MHz at the output. With A5FL3 at logic '0', 10 MHz from fixed frequency input board A5A1 is amplified in saturated transistor Q1 which generates a 10-MHz signal rich in harmonics. The seventh harmonic (70 MHz) is selected by the 70-MHz band-pass filter C2, C5, C6, L1, and L2. This 70-MHz signal is amplified by amplifier Q2 and filtered by 70-MHz band-pass filter L3, C9, C10, L5, and C11. The 70-MHz signal is applied to driver stage Q3 which drives U1. U1 is a Schottky TTL flip-flop operating as a frequency divide-by-two circuit producing 35 MHz. The 35 MHz passes through RF switch Q8 and CR1. Q8 is conducting and CR1 is reverse biased so that the 35-MHz signal appears as an output at A5J6. Note that U2 and the second half (U1B) of U1 are inhibited so that no other signals appear at the output.

4-81. To generate 35.5 MHz, 64 MHz from A5A5 is amplified and isolated by amplifier stages Q4 and Q5 so that a buffered 64-MHz signal is applied to the base of Q6. A5FL3 is set at a logic '1' level which enables U2 and both halves of U1. A logic '1' also turns on CR1 and turns off Q8 so that 35 MHz is isolated from the output by more than 20 dB. The 35 MHz present at U1 pin 5 is connected to pin 8 of U2 which is a Schottky BCD counter functioning as a frequency divide-by-ten circuit producing 3.5 MHz at U2 pin 12. This 3.5 MHz signal is applied to the base of Q6 along with the 64-MHz signal causing Q6 to act as a mixer generating sum and difference products of 64 MHz and 3.5 MHz and its harmonics. The 71-MHz product is selected by 71-MHz band-pass filter L10, L11, C29, C30, and C31. This 71-MHz signal is amplified by driver Q7 and applied to U1 pin 13. U1 is a frequency divide-by-two circuit generating the required 35.5 MHz. The output of A5A6 is -5 dBm and all sidebands, not harmonically related, are 20 dB below the carrier. The output signal provides the input reference for the lower order BCD assembly.

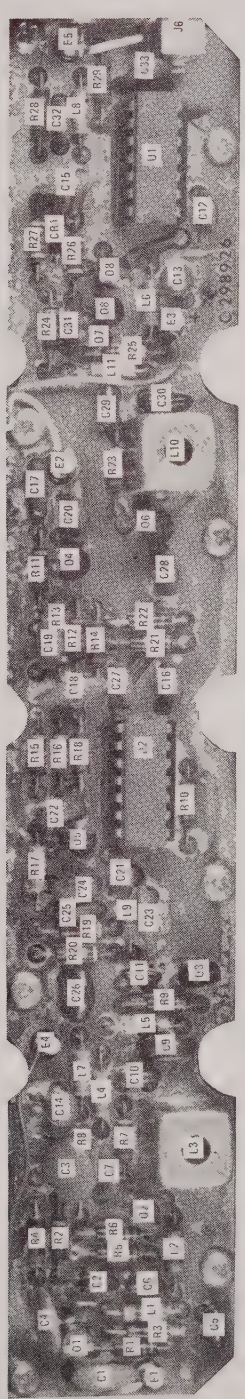


Figure 4-39. 35/35.5 MHz Board A5A6, Component Locations

4-82. POWER SUPPLY A11

4-83. The power supply is a series-regulated, constant-voltage, low-noise supply. It has dual outputs of +5.2 Vdc at 5 amps and -12 Vdc at 4.5 amps. The power supply consists of four sections: most of rear panel assembly A12, part of front panel assembly A1, filter/regulator boards A11A1 through A11A3, and part of logic and power distribution board A14. The following paragraph describe each of the sections that make up the power supply.

4-84. REAR PANEL ASSEMBLY A12. (See Figures 4-40 and 4-41.)

4-85. The input line voltage passes through a line filter, two line fuses (2.5 Amp Slo-Blo F1 and F2*), and into 115/230 volt switch S1. Switch S1 is a 4PDT switch with two poles used to switch the 115/230 volt inputs to the power transformer and the other two poles used to switch the 115/230 volt inputs to the fan and the plug-in section.

NOTE

The 115/230 Vac input to the plug-in section is required for plug-ins that need supply voltages other than +5.2 and -12 Vdc.

The hot line connection between the transformer section and the fan section of S1 is passed through a relay on A12A1. When the system is on, the fan off input to this board is floating and the relay contact is in its normally closed position thus applying ac power to the fan and plug-in. When the system is switched to STANDBY, -12 Vdc is present on the fan off input, activating the relay and opening the contact which turns off power to the fan and the plug-in. At the output of transformer T1 are two 0.1 μF capacitors (C1 and C2) which are needed to suppress transients on the ac lines. The transformer outputs are wired to two full-wave bridge rectifiers (BR1 and BR2) mounted on a heat sink on the rear panel. The outputs of the bridge rectifiers and three of the four outputs from the transformer are then wired to filter board A11A1. The only other power supply components mounted on the rear panel are Darlington pair pass transistor Q1 and Q2 which are also mounted on a heat sink.

4-86. FILTER/REGULATOR ASSEMBLY A11. (See Figure 4-40.)

4-87. The filter regulator assembly consists of four PC boards: filter board A11A1, +5.2 V regulator A11A2, -12 V regulator A11A3, and motherboard A11A4. The motherboard (Figure 4-42) provides all the interconnections between the other three PC boards, rear panel assembly A12 and, logic and power distribution board A14.

*F1 and F2 should be 1.5 Amp Slo-Blo for 230 volt operation.

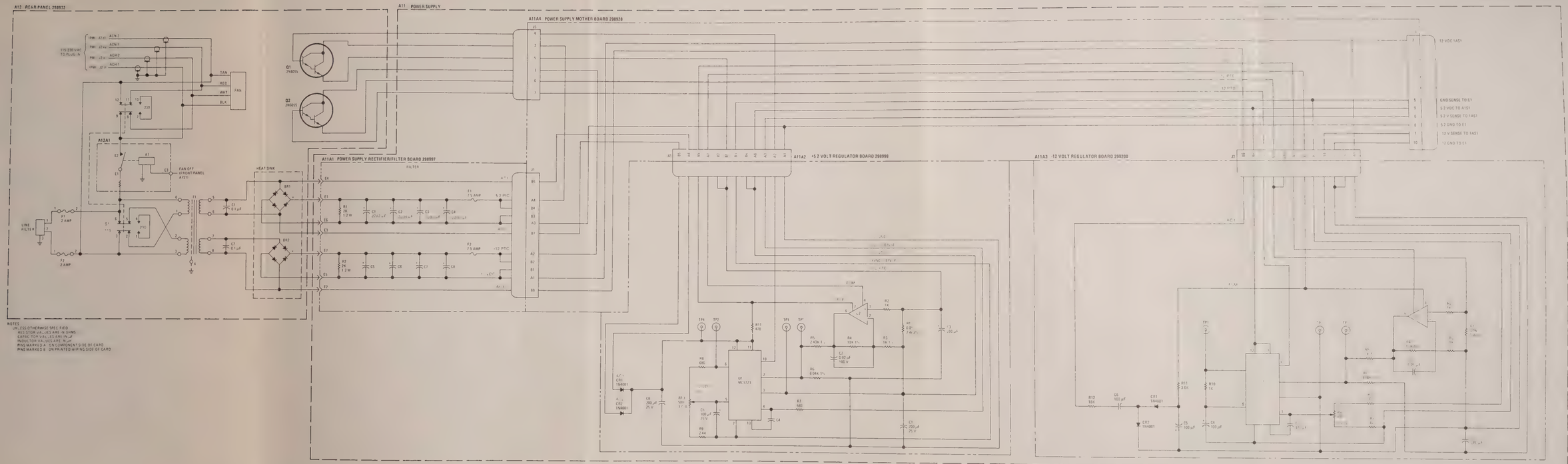


Figure 4-40. Rear Panel Assembly A12 and Filter/Regulator A11, Schematic Diagram

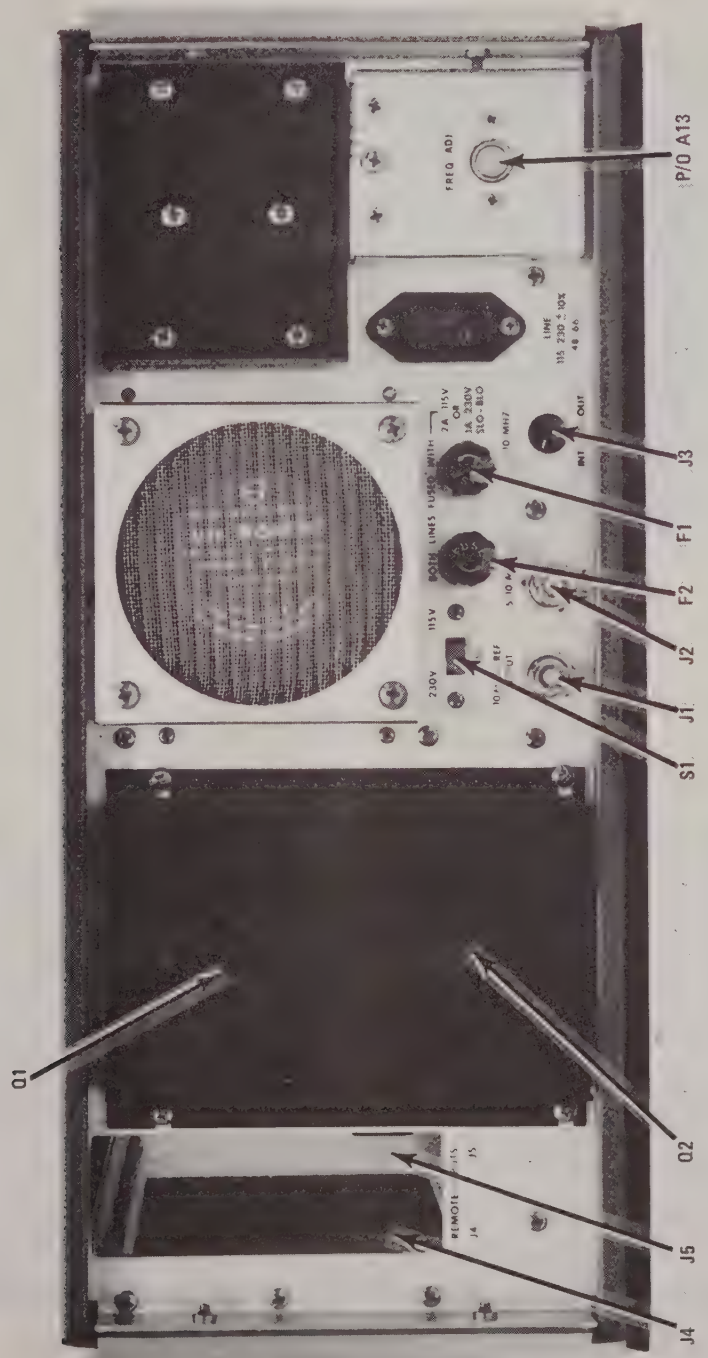


Figure 4-41. Rear Panel Assembly A12 Component Locations

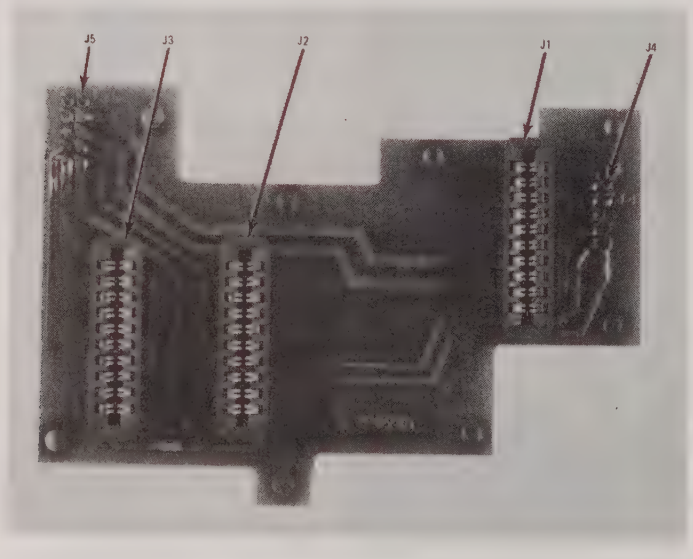


Figure 4-42. Power Supply Mother Board A11A4

4-88. FILTER BOARD A11A1.

4-89. Filter board A11A1 (Figure 4-43) has seven individually removable inputs (E1 through E7) coming from bridge rectifiers BR1 and BR2 and transformer T1. Four of the inputs are connected across filter capacitors. The inputs at E1 and E6 are filtered by capacitors C1 through C4 in parallel and the filtered dc is applied through motherboard A11A4 to the collector of +5.2 V pass transistor A12Q1. The inputs at E7 and E5 are filtered by capacitors C5 through C8 in parallel and the filtered dc is applied through motherboard A11A4 to the collector of -12 V pass transistor A12Q2. Fuses F1 and F2 are provided to protect the supply from a catastrophic failure such as the pass transistor shorting where the regulators would not be able to control the current and very high dc currents would flow. Resistors R1 and R2 across the filter capacitors are bleeder resistors which allow the capacitors to discharge when the dc load current path is opened. The other three ac voltage inputs to the filter board are fed through the motherboard to the appropriate regulator board.

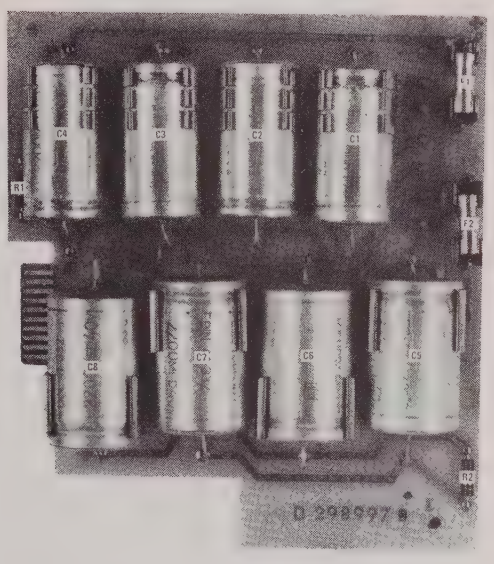


Figure 4-43. Filter Board A11A1, Component Locations

4-90. 5.2 V REGULATOR A11A2.

4-91. The 5.2 V regulator (Figure 4-44) is basically an IC regulator driving a pass transistor (A12Q1) to boost current output capability. The regulators feature foldback current limiting and overvoltage protection. On the 5.2 V regulator, inputs AC1 and AC2 are rectified and filtered by CR1, CR2, and C6 providing the dc bias for U1. This input must be at least 3 volts greater than the output of pin 10. The output of U1 (pin 10), 5.2 PTB, drives the base of Darlington pass transistor A12Q1 while the emitter is returned to the regulator board where the dc load current passes through .05 ohm resistor R1 and is then brought out to the front panel assembly through connector J4 on the motherboard. Three other outputs from this board are 5.2 GND, 5.2 V SENSE, and GND SENSE which are also brought out to J4 on the motherboard.

4-92. The 5.2 V SENSE line is connected through R7 to pin 4 of U1 which is the inverting input to a differential amplifier inside U1. This is balanced against a reference input into pin 5 which is the noninverting input. The reference output of U1 (pin 6) is 7.15 volts which is divided down by R8, R9, and R10. R10 is the voltage adjust potentiometer which allows

Figure 4-44. 5.2 Volt Regulator A11A2, Component Locations

the reference input at pin 5 to be adjusted to +5.2 volts. Capacitor C5 is used to reduce the noise and ripple voltage on the regulated dc output. Capacitor C4 assures frequency stability of U1.

4-93. An important feature of this regulator is foldback current limiting which is provided by R1 through R6, C2, and U2. The voltage drop across R1 is amplified by U2 and applied through a voltage divider to pin 2 of U1. The voltage at pin 2 of U1 is now directly dependent on the voltage drop across R1 which depends on the load current. When the load current reaches 5.5 amp (0.5 amp above rated load), the voltage at pin 2 of U1 is approximately 0.7 volts greater than that at pin 3 of U1, which turns on an internal transistor. The transistor reduces the voltage and current drive capability of U1. As a result, the voltage and current outputs of the regulator start to drop. U2 requires two supplies, positive and negative. The positive supply comes from the voltage input to U1 through dropping resistor R11 to keep the supply voltage below the rated limit of U1. This voltage is also used to power U2 on the -12 V regulator and is therefore, an output from the 5.2 V regulator (foldback supply positive, FSP). The negative supply is generated on the -12 regulator board and is an input to this board (foldback supply minus, FSM).

4-94. -12 V REGULATOR A11A3.

4-95. The -12 V regulator (Figure 4-45) is basically the same design as the 5.2 V regulator so only the differences will be described. Basically it is still a positive output regulator design where the positive end is grounded and the negative end is taken as the -12 volt otuput. Since the desired output of 12 volts is greater than the internal reference of 7.15 volts, the voltage divider adjust resistors (R7, R8, and R9) are wired to the inverting input of U1 (pin 4), where the adjustment is now made to place a voltage of +7.15 volts with respect to the -12 volt output (or -4.85 volts with respect to ground) on pin 4. Pin 4 is balanced against the internal reference of 7.15 volts which is connected to pin 5 from pin 6 of U1 through R10. An ac input (AC3) from the transistor is wired to R12, C5, C6, CR1 and CR2 to create the negative supply voltage for U2 on both regulator boards. All other component functions are identical to the 5.2 V regulator.

4-96. LOGIC AND POWER DISTRIBUTION A14. (See Figures 4-46 and 4-47.)

4-97. The voltage output and sense wires for the -12 V and +5.2 V regulators are connected at the input to line switch A1S1. The output of the switch is then wired to the logic and power distribution board A14 where they are distributed to the appropriate connectors which carry power to the different sections of the system. In addition, the fan off signal comes from the line switch and is wired such that it is floating when the system is on and

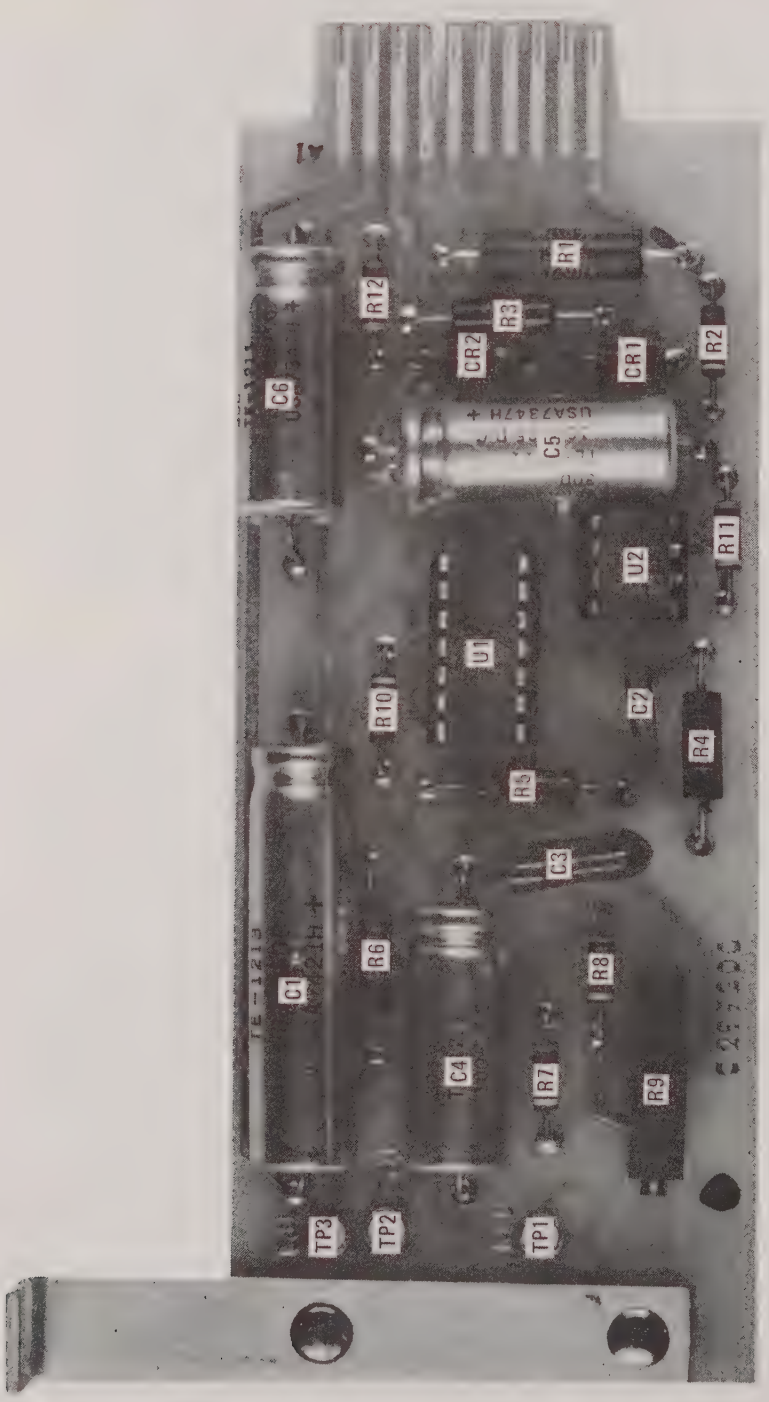


Figure 4-45. -12 Volt Regulator A11A3, Component Locations

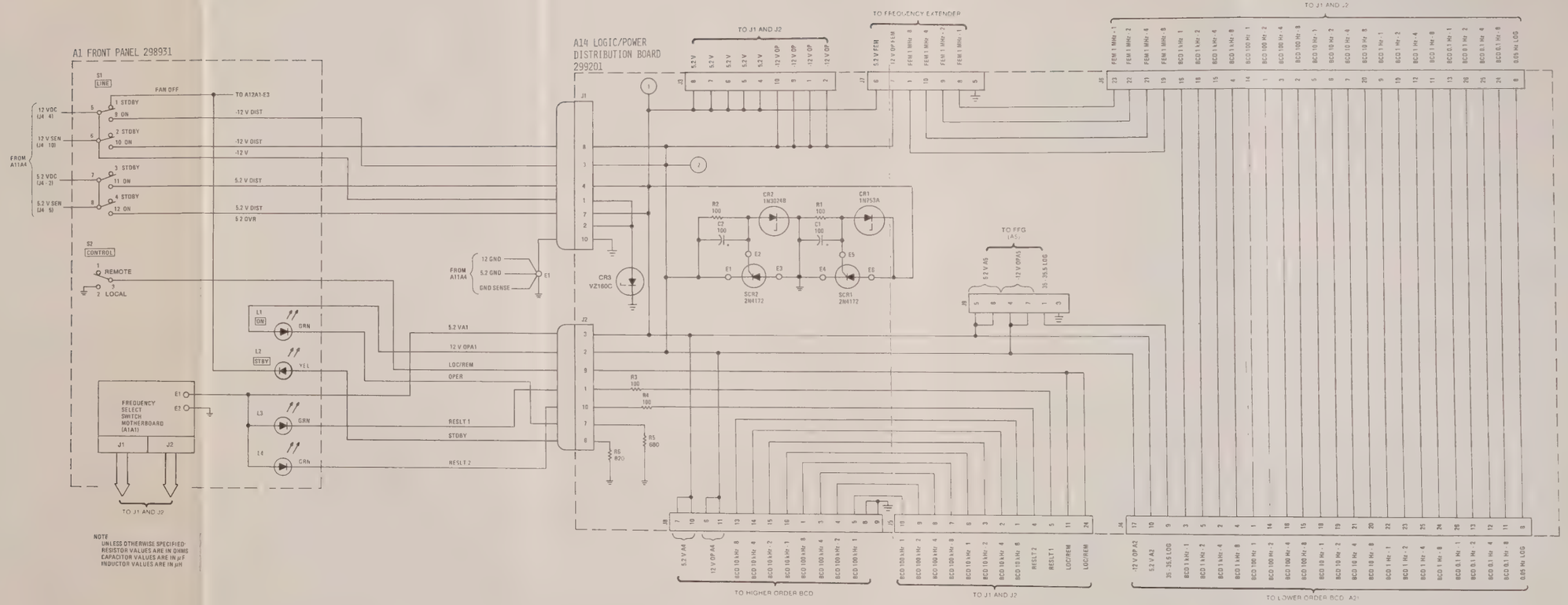


Figure 4-46. Logic and Power Distribution Board A14, Schematic Diagram

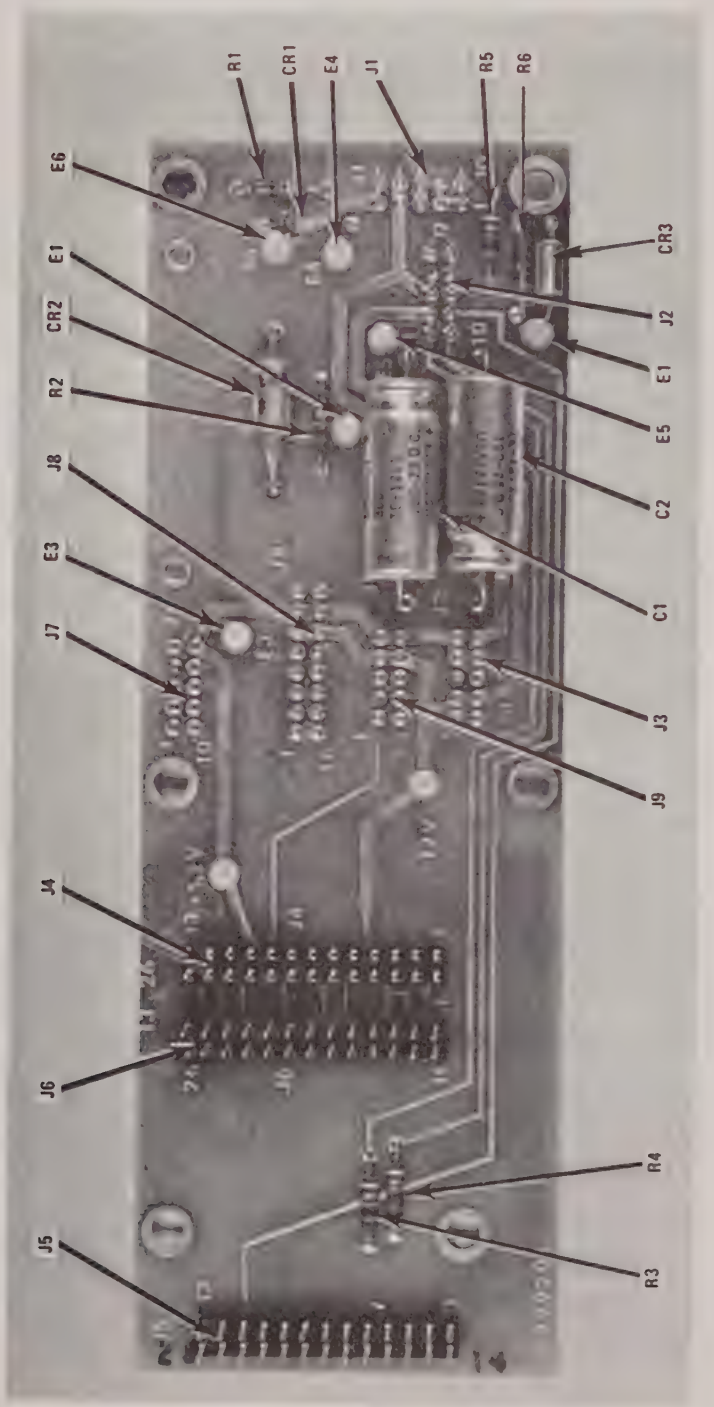


Figure 4-47. Logic and Power Distribution Board A14, Component Locations

is wired to -12 V when the system is in standby. Another function of this board is to provide overvoltage protection for the system. The +5.2 volt overvoltage circuit consists of CR1 and SCR1. If the 5.2 V exceeds 7 volts, SCR1 fires shorting the 5.2 V to ground. Similarily CR2 and SCR2 protect the -12 V for voltages exceeding -15 volts. These circuits are used only in the POWER ON mode. In STDBY it is necessary to protect the -12 volts. This is accomplished by diode CR3. If an SCR does fire due to an overvoltage condition, ac power must be removed from the unit. If the overvoltage condition has been eliminated, power may be reapplied to restore dc power. The ground return wires for +5.2 and -12 volts and the ground sense wire are each brought out and wired to the single point chassis ground.

4-98. 24/33 MHz OSCILLATOR A6. (See Figures 4-48 and 4-49.)

4-99. The 24/33 MHz oscillator generates ten discrete frequencies in 1-MHz steps controlled by the frequency extender module logic. Two isolated outputs are provided.

4-100. 24-33 MHz OSCILLATOR A6A1. (See Figures 4-48 and 4-50.)

4-101. This board generates ten discrete frequencies from 24 to 33 MHz in 1-MHz increments. The board contains logic decoder U1, ten oscillators, and divide-by-three circuit U2. The oscillators operate from 72 to 99 MHz in 3-MHz increments so that after the divide-by-three circuit they produce the required 24-33 MHz. The logic decoder is a BCD-to-decimal decoder. The output frequency is given for each input BCD code in table 4-3.

4-102. Each of the ten oscillators are identical, therefore, only one is described. When the four logic inputs are in a 'low' state (0000 programmed), pin 1 of U1 is 'low'. When pin 1 is low, PNP transistor Q10 goes on raising the collector to approximately 4.5V. This turns on 72-MHz NPN oscillator Q9, which is a Colpitts oscillator with the resonant circuit formed by C17, C18, and C19 resonating with L10. The output of the oscillator is formed by common coupling line L9 coupling energy from resonating inductor L10.

4-103. If another BCD code appears at the input, for example, a 1001, then pin 1 is high. The collector of Q10 goes to -12 Vdc. This condition provides no bias for Q9 and, therefore, this oscillator is off. However, pin 9 is low turning on Q16 which turns on oscillator Q15. The output of this oscillator also is coupled into the common coupling line L9.

4-104. Coupling line L9 feeds amplifier driver Q21 which boosts the signal level to drive U2. U2 is a dual Schottkey flip-flop wired as a frequency divide-by-three to generate the required 24 to 33 MHz. The output of this board drives the power divider on A6A2. The output level is a 2-volt peak-to-peak square wave.

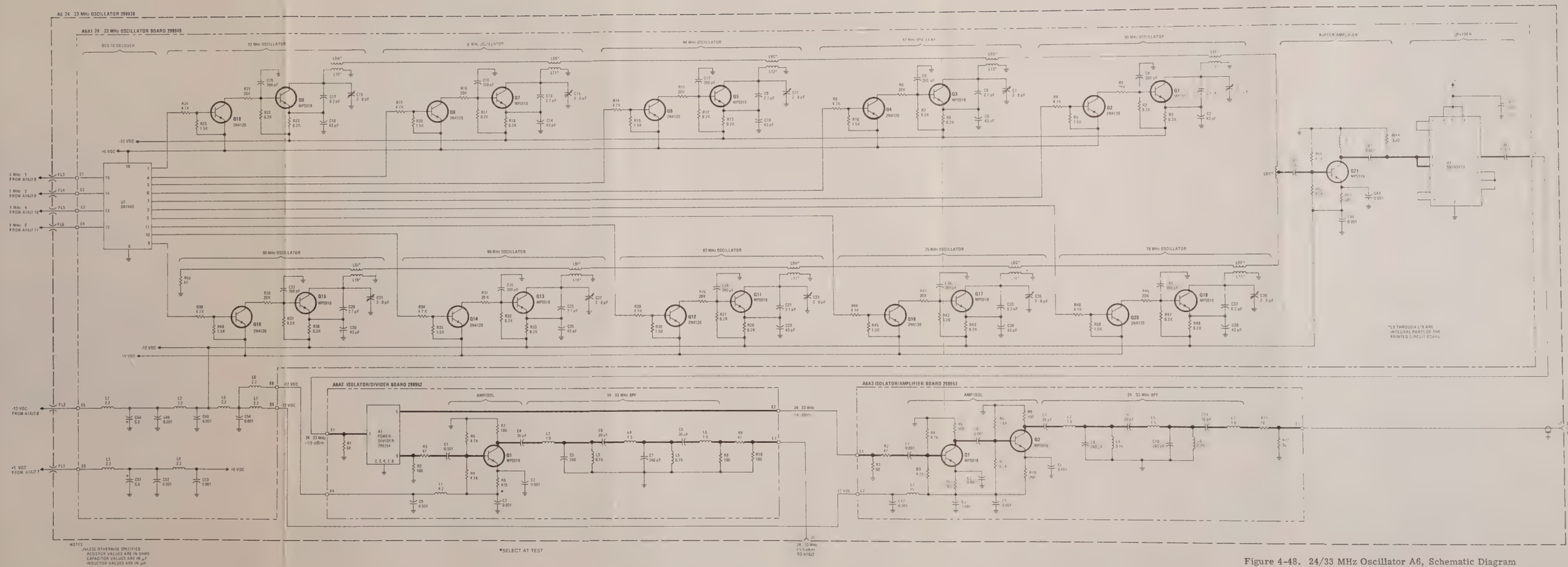

A6 24 33 MHz OSCILLATOR 298938
A6A1 24 33 MHz OSCILLATOR BOARD 298505
BCD TO DECODER
72 MHz OSCILLATOR
8 MHz OSCILLATOR
84 MHz OSCILLATOR
67 MHz OSCILLATOR
90 MHz OSCILLATOR
BUFFER AMPLIFIER
DIVIDER
96 MHz OSCILLATOR
93 MHz OSCILLATOR
75 MHz OSCILLATOR
78 MHz OSCILLATOR
+5 VDC
-12 VDC
1 MHz 1 FROM A1A27J8
1 MHz 2 FROM A1A27J9
1 MHz 4 FROM A1A27J10
1 MHz 8 FROM A1A27J11
+12 VDC FROM A1A27J6
+5 VDC FROM A1A27J7
A6A2 ISOLATOR/DIVIDER BOARD 298952
AMP/ISOL
24 33 MHz BPF
24 33 MHz -10 dBm
A6A3 ISOLATOR/AMPLIFIER BOARD 298953
24 33 MHz +5 dBm TO A1J11
24 33 MHz +5 dBm TO A1J27
*LS THROUGH L19 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD.
NOTES
UNLESS OTHERWISE SPECIFIED
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN µf
INDUCTOR VALUES ARE IN µH
*SELECT AT TEST

Figure 4-48. 24/33 MHz Oscillator A6, Schematic Diagram

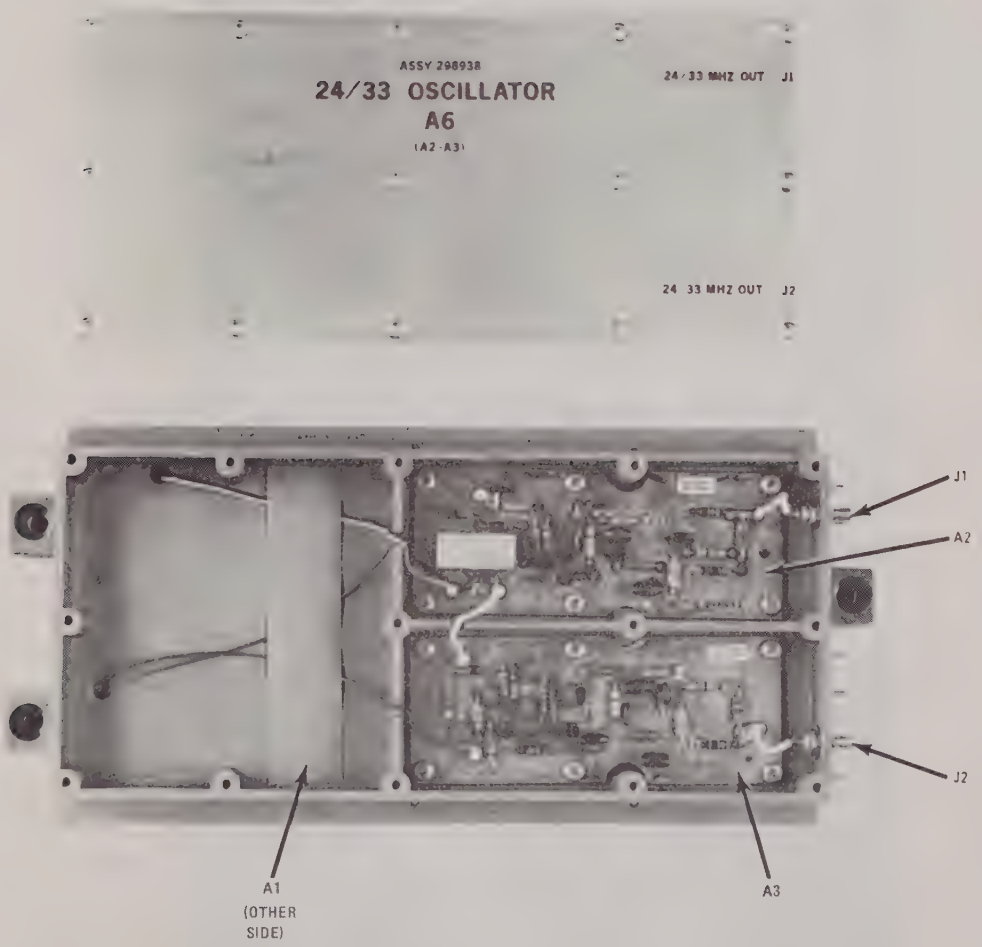


Figure 4-49. 24/33 MHz Oscillator A6

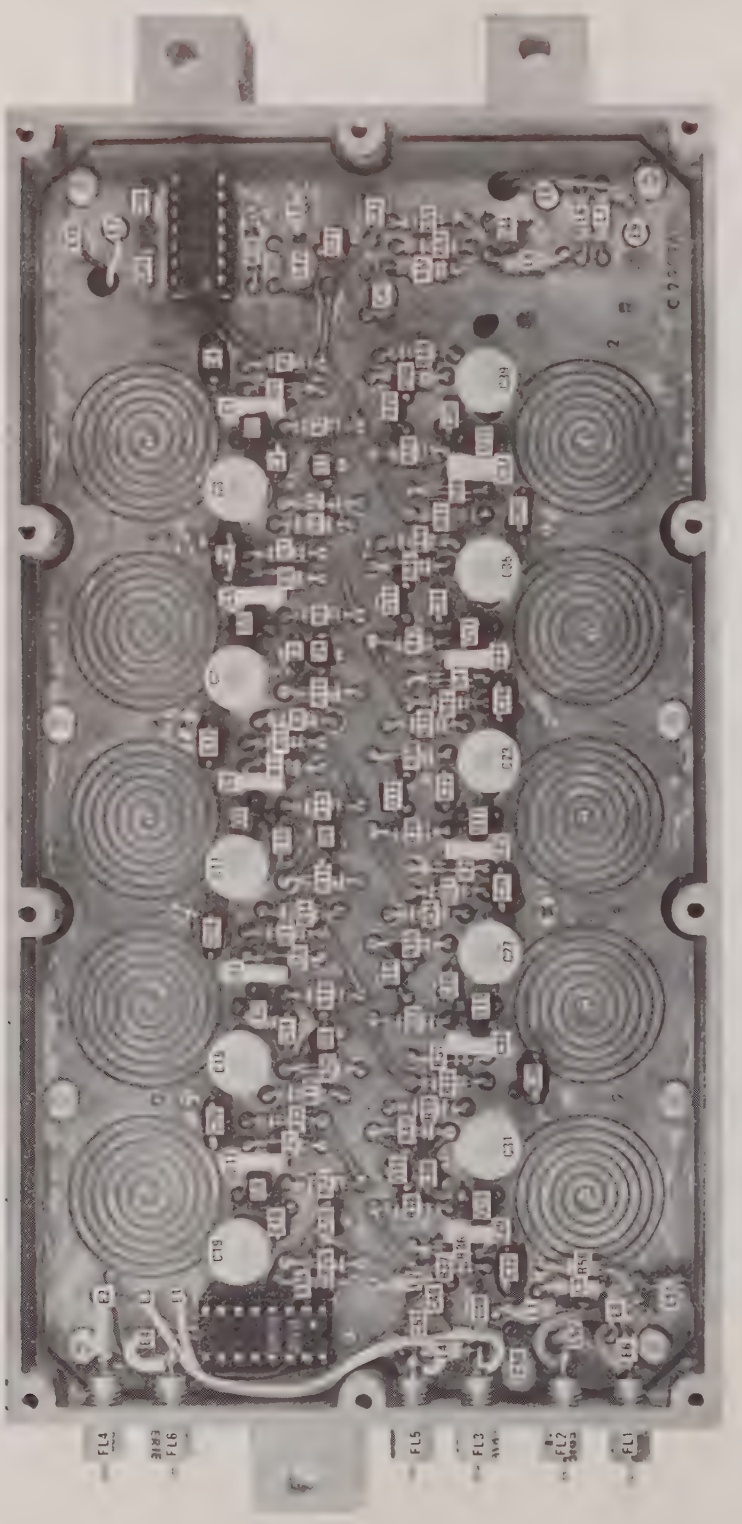


Figure 4-50. 24/33 MHz Oscillator Board A6A1, Component Locations

TABLE 4-3
BCD OUTPUT FREQUENCIES

BCD Code				Oscillator Frequency	Output Frequency
1 MHz-1	1 MHz-2	1 MHz-4	1 MHz-8		
0	0	0	0	72	24 MHz
1	0	0	0	75	25
0	1	0	0	78	26
1	1	0	0	81	27
0	0	1	0	84	28
1	0	1	0	87	29
0	1	1	0	90	30
1	1	1	0	93	31
0	0	0	1	96	32
1	0	0	1	99	33

4-105. ISOLATOR DIVIDER A6A2. (See Figures 4-48 and 4-51.)

4-106. The output from the 24/33 MHz oscillator is applied to power divider A1 which splits the signal into two outputs each feeding an isolation amplifier and band-pass filter. One amplifier isolator is on A6A3, the other is formed by Q1 on A6A2. The amplifier is followed by a 24- to 33-MHz band-pass filter which provides isolation to frequencies not in the passband and filters the harmonics of 24 to 33 MHz appearing at the filter input. The filter is formed by C4 through C8 and L2 through L6. The output is a sine wave at a level of about -6 dBm.

4-107. ISOLATOR/AMPLIFIER A6A3. (See Figures 4-48 and 4-52.)

4-108. Q1 and Q2 form an isolator/amplifier for the 24- to 33-MHz signal. The output of the amplifier feeds a band-pass filter consisting of C7 through C11 and L3 through L7. This filter filters out harmonics which appear at its input as well as providing isolation to signals outside the filter bandpass. The level out of this board is a 6-dBm sine wave.

4-109. 366 MHz FILTER CONVERTER A7. (See Figures 4-53 and 4-54.)

4-110. The 366 MHz filter converter mixes the 337-MHz output from A10J1 with the 29-MHz from the modulation unit producing 366 MHz. The 366-MHz signal is selected by the band-pass filter. The output of the filter is mixed with the 35-36 MHz output from the higher order BCD producing 330-331 MHz for further processing in filter amplifier A9.

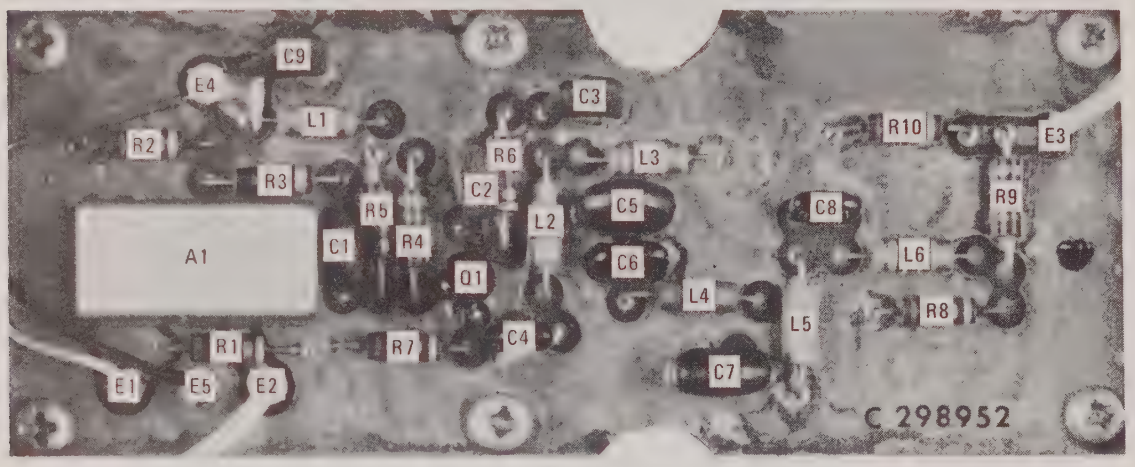


Figure 4-51. Isolator/Divider Board A6A2, Component Locations

Figure 4-52. Isolator/Amplifier Board A6A3, Component Locations

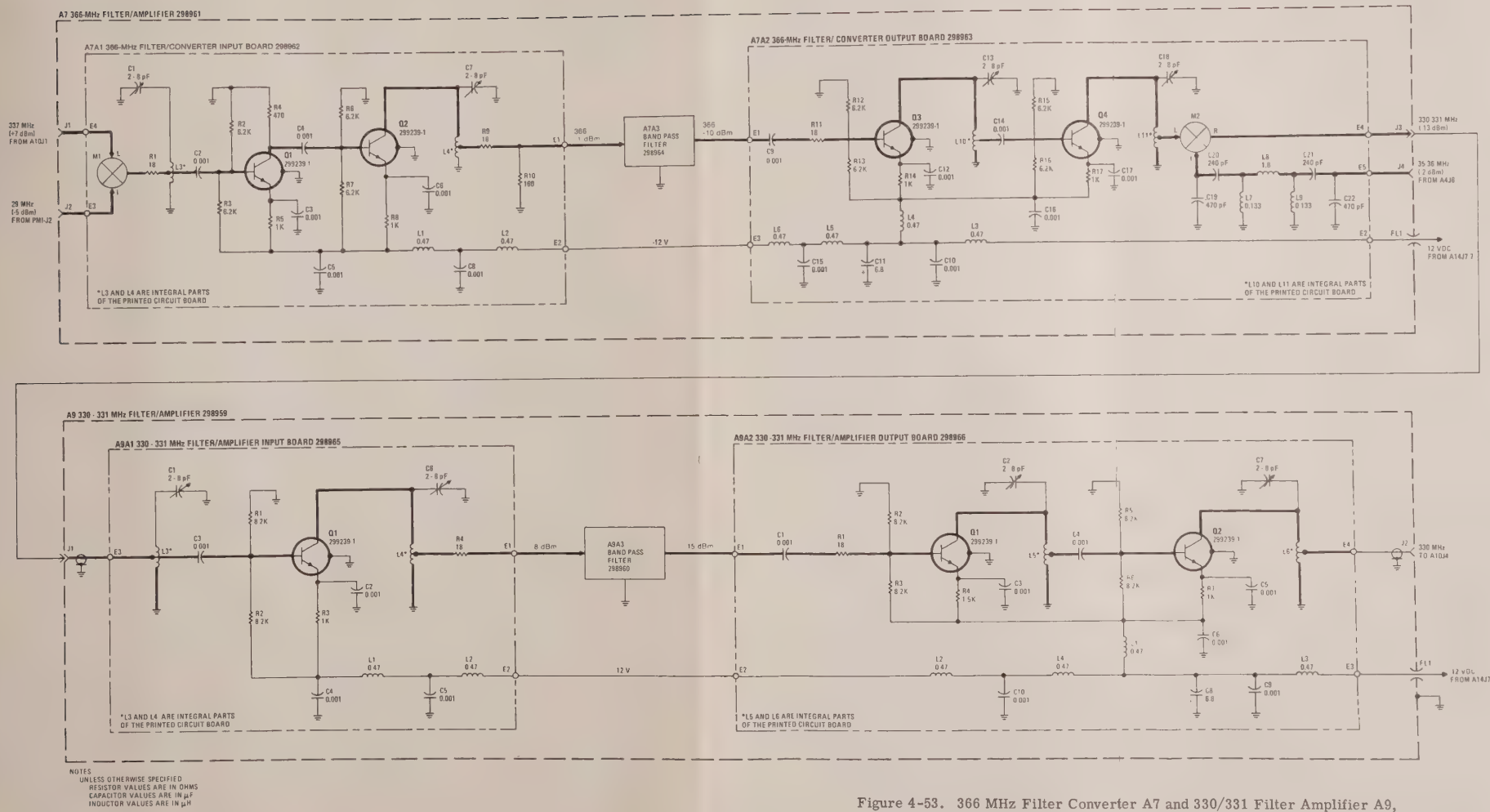

A7 366-MHz FILTER/AMPLIFIER 298961
A7A1 366-MHz FILTER/CONVERTER INPUT BOARD 298962
A7A2 366-MHz FILTER/ CONVERTER OUTPUT BOARD 298963
337 MHz (+7 dBm) FROM A10J1
29 MHz (-5 dBm) FROM PMI-J2
A7A3 BAND PASS FILTER 298964
366 -1 dBm
366 -10 dBm
330 331 MHz (13 dBm)
35 36 MHz (2 dBm) FROM A4J6
12 VDC FROM A14J7 7
-12 V
*L3 AND L4 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD
*L10 AND L11 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD
A9 330 - 331 MHz FILTER/AMPLIFIER 298959
A9A1 330 - 331 MHz FILTER/AMPLIFIER INPUT BOARD 298965
A9A2 330 - 331 MHz FILTER/AMPLIFIER OUTPUT BOARD 298966
A9A3 BAND PASS FILTER 298960
8 dBm
15 dBm
330 MHz TO A10J4
12 V
12 VDC FROM A14J7 7
*L3 AND L4 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD
*L5 AND L6 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD
NOTES
UNLESS OTHERWISE SPECIFIED
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN µF
INDUCTOR VALUES ARE IN µH

Figure 4-53. 366 MHz Filter Converter A7 and 330/331 Filter Amplifier A9, Schematic Diagram

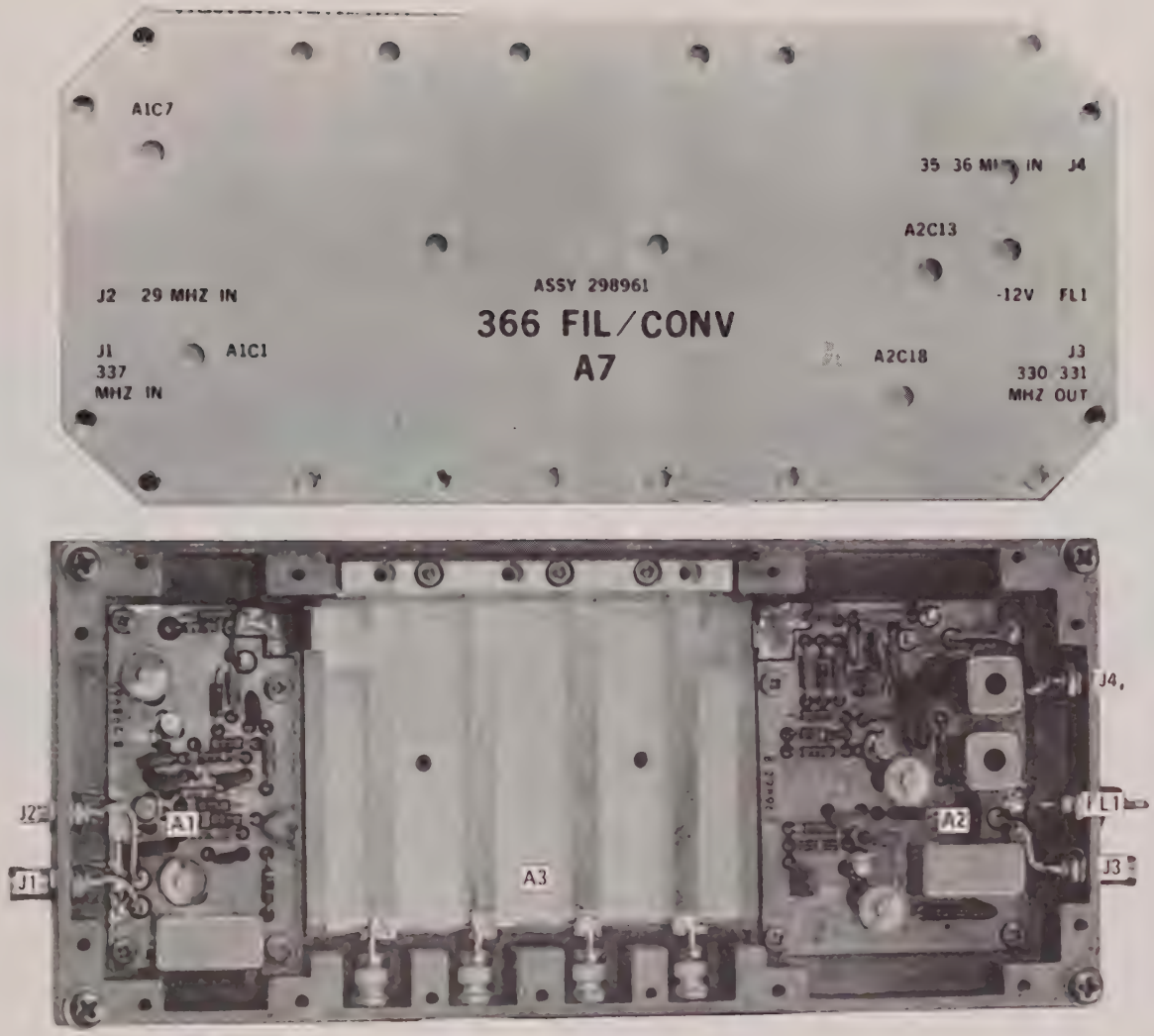


Figure 4-54. 366 MHz Filter Converter A7

4-111. 366 MHz FILTER/AMPLIFIER INPUT BOARD A7A1. (See Figures 4-53 and 4-55.)

4-112. This board mixes the 337-MHz signal from the 337-MHz oscillator isolator with 29 MHz. The 29 MHz comes from an optional modulator in the RF plug-in or from 29-MHz converter A10A6. Mixer M1 produces the sum and difference of these two frequencies. The sum frequency is 366 MHz. L3 and C1 are a resonant circuit tuned to 366 MHz which select the proper input frequency for the two-stage amplifier formed by Q1 and Q2. This amplifier provides a gain of 11 dB, after the mixer conversion loss of 7 dB yielding an overall gain of 4 dB.

4-113. 366 MHz FILTER CONVERTER OUTPUT BOARD A7A2. (See Figures 4-53 and 4-56.)

4-114. The 366-MHz signal from the band-pass filter is further amplified by Q3 and Q4 which form a 20-dB gain amplifier at 366 MHz. The output of this amplifier is at a level of +7 dBm to drive the local oscillator input of mixer M2. The 35/36 MHz from BCD section A4 is applied to a 35/36 MHz band-pass filter consisting of C19 through C22 and L7 through L9. This filter removes the 8.75 to 9 MHz sidebands which appear on the BCD output. This filtered 35/36-MHz signal is mixed with the 366-MHz signal in M2 to produce sum and difference frequencies. This signal is applied to 330/331 MHz filter amplifier A9 which selects the difference frequency 330/331 MHz.

4-115. 366 MHz BANDPASS FILTER A7A3

4-116. This is an 1/8 wavelength stripline band-pass filter tuned to 366 MHz. The insertion loss is 7 dB. It has a 3-dB bandwidth of approximately 3 MHz and provides greater than 80-dB rejection bandwidth of 58 MHz. This in a combination with the tuned amplifiers provides the filtering required for 100-dB spurious performance.

4-117. 361-370 MHz FILTER AMPLIFIER A8. (See Figures 4-57 and 4-58.)

4-118. The 361-370 MHz filter takes the output from the mixer on board A10A2 which heterodynes the 337 MHz with the output of the 24 to 33 MHz oscillator producing 361-370 MHz. The upper sideband generated in this mixer is selected by band-pass filter A8A3.

4-119. 361-370 MHz INPUT BOARD A8A1

4-120. Input board A8A1 (Figure 4-59) amplifies the input signal by 5 dB. Resistors R1 and R2 form a 3-dB pad to terminate the mixer output. Capacitor C1 and inductor L3 form a 365-MHz resonant circuit to select the correct signal for the amplifier input. Transistor

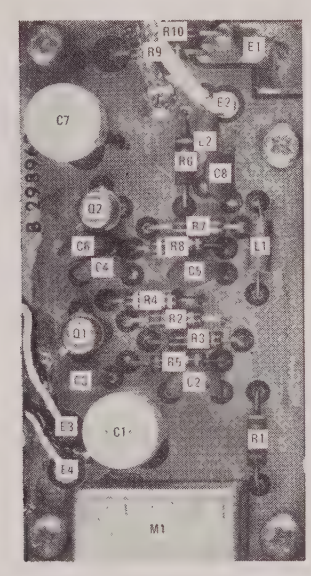


Figure 4-55. 366 MHz Filter Converter Input Board A7A1, Component Locations

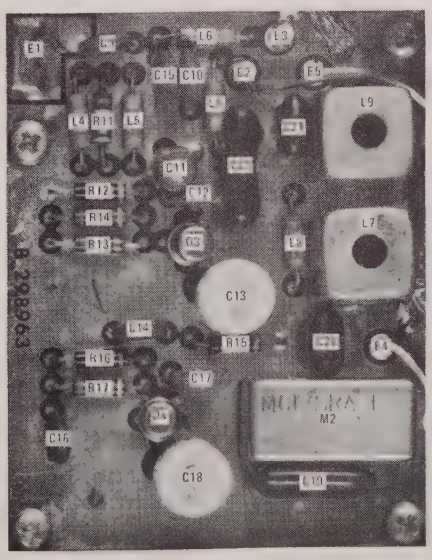


Figure 4-56. 366 MHz Filter Converter Output Board A7A2, Component Locations

Q1 has a gain of 8 dB at 365 MHz. C5 and L4 tune this amplifier and provide impedance matching at the output.

4-121. 361-370 MHz OUTPUT BOARD A8A2

4-122. Output board A8A2 (Figure 4-60) provides 15 dB of gain also tuned to 365 MHz. Amplifier Q1 is tuned by the resonant circuit formed by C4 and L8. The output of Q1 is coupled through C5 into a similar circuit. Q2 is the amplifier; C7 and L9 are the resonant circuits. Inductors L3, L4, and L5 and capacitors C9 and C10 comprise a 400-MHz low-pass filter to further reject the second harmonic of the output signal. Resistors R8 and R9 form a 3-dB pad. The output of this board goes to the RF input of mixer A10A4.

4-123. 361-370 MHz BAND PASS FILTER A8A3

4-124. This board is a 7-pole band-pass filter covering the band from 361 to 370 MHz. The insertion loss is approximately 10 dB. This filter, in conjunction with the selectivity of the input and output amplifiers, provides 100-dB rejection at 337 MHz and below.

4-125. 330/331 MHz FILTER AMPLIFIER A9. (See Figures 4-53 and 4-61.)

4-126. The 330/331 MHz filter amplifier selects the 330- to 331-MHz lower sideband from the mixer in filter converter A7.

4-127. 330-331 MHz FILTER AMPLIFIER INPUT BOARD A9A1. (See Figure 4-62.)

4-128. L3 and C1 form a resonant circuit tuned to 330.5 MHz to select the proper input for transistor amplifier Q1. Q1 is a 10-dB gain amplifier at 330.5 MHz tuned by the resonant circuit L4 and C6. The amplified signal is applied to narrowband band-pass filter A9A3 at 330-331 MHz.

4-129. 330-331 MHZ FILTER AMPLIFIER OUTPUT BOARD A9A2. (See Figure 4-63.)

4-130. Transistors Q1 and Q2 form a 20-dB gain tuned amplifier at 330.5 MHz.

4-131. 330-331 MHz BAND-PASS FILTER A9A3

4-132. This unit is a 5-pole stripline band-pass filter having a 3-dB bandwidth of greater than 3 MHz. It provides 90 dB of rejection at 366 MHz so that in combination with the tuned amplifiers the 100-dB spur performance is guaranteed.

4-133. HIGH FREQUENCY SUBASSEMBLY A10 (See Figures 4-64 and 4-65.)

4-134. The high frequency subassembly houses all the remaining printed circuit boards used in the frequency extender.

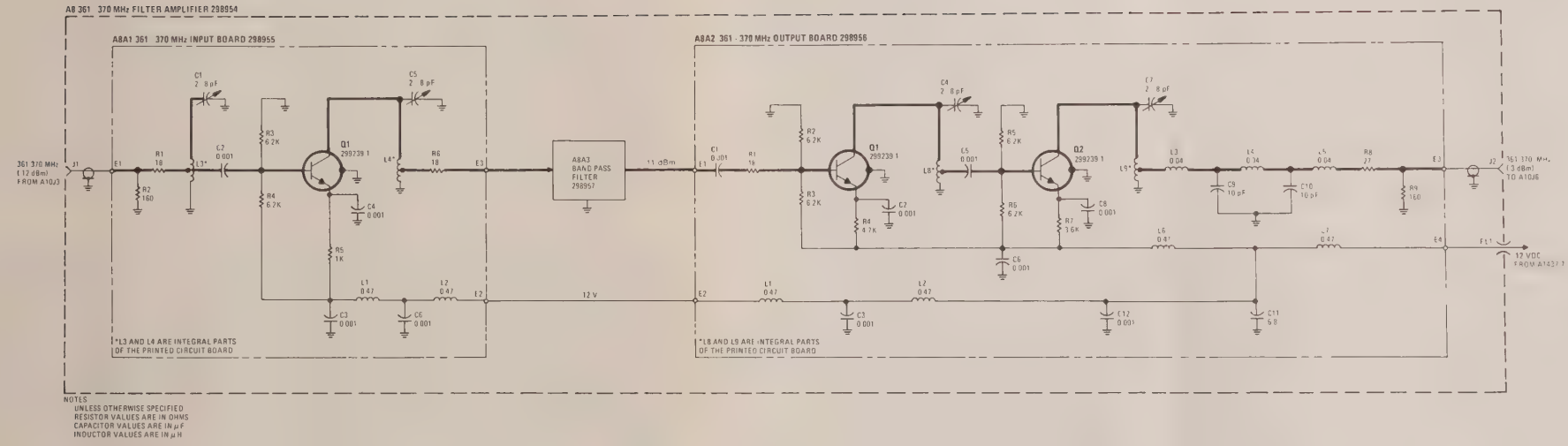

A8 361 370 MHz FILTER AMPLIFIER 298954
A8A1 361 370 MHz INPUT BOARD 298955
A8A2 361 370 MHz OUTPUT BOARD 298956
A8A3 BAND PASS FILTER 298957
11 dBm
12 V
*L3 AND L4 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD
*L8 AND L9 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD
NOTES
UNLESS OTHERWISE SPECIFIED
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN μF
INDUCTOR VALUES ARE IN μH

Figure 4-57. 361/370 MHz Filter Amplifier A8, Schematic Diagram

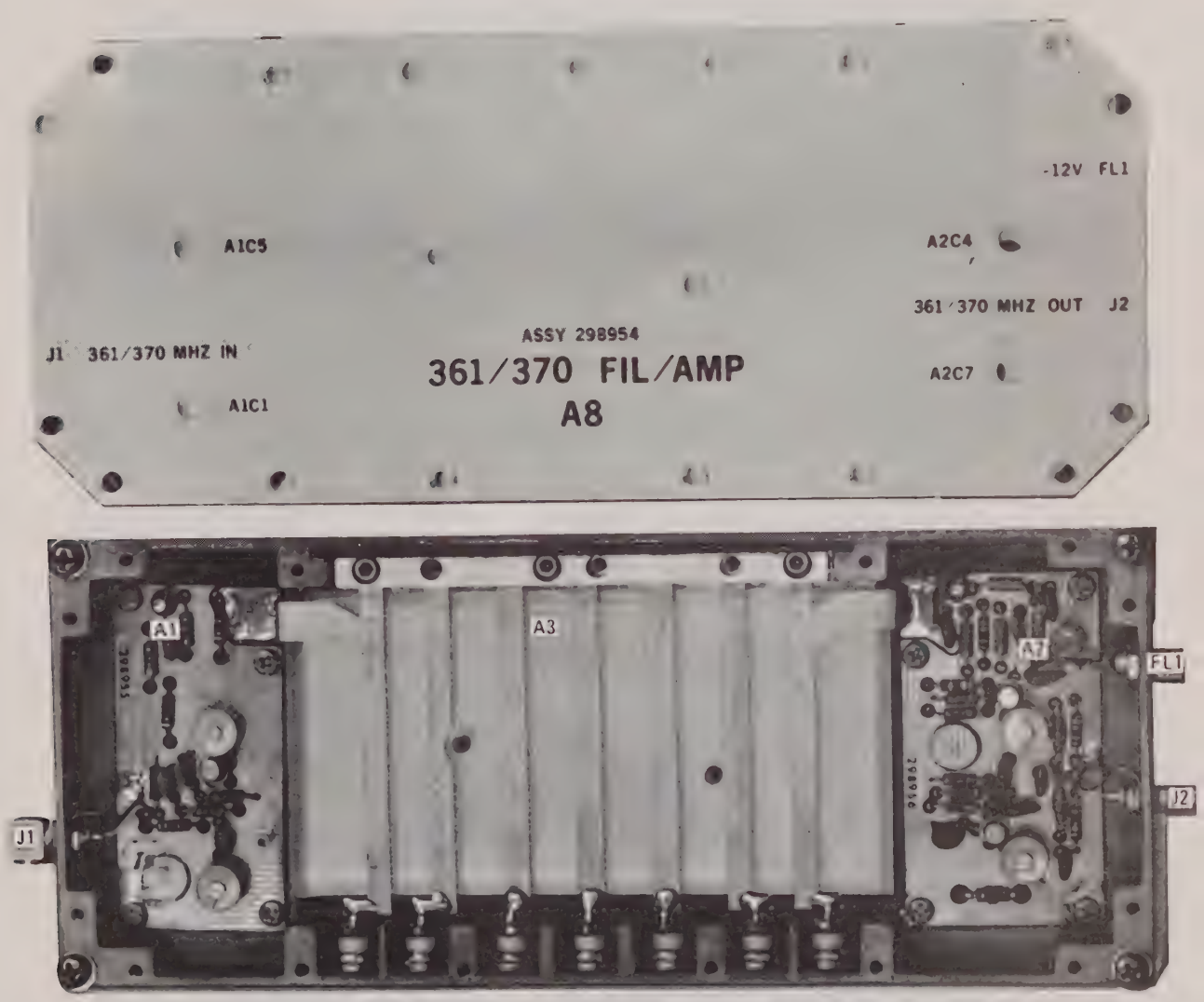


Figure 4-58. 361/370 MHz Filter Amplifier A8

Figure 4-59. 361/370 MHz Filter Amplifier Input Board A8A1, Component Locations

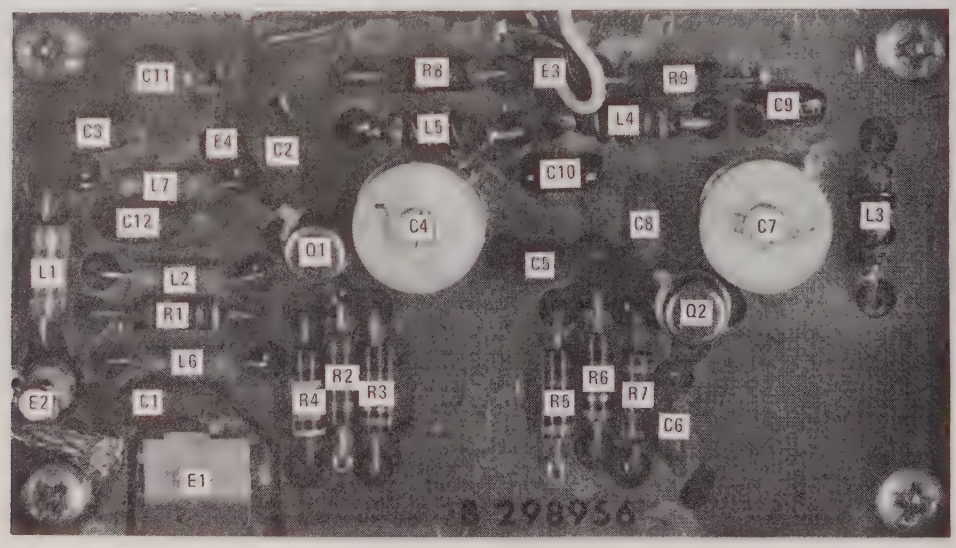


Figure 4-60. 361/370 MHz Filter Amplifier Output Board A8A2, Component Locations

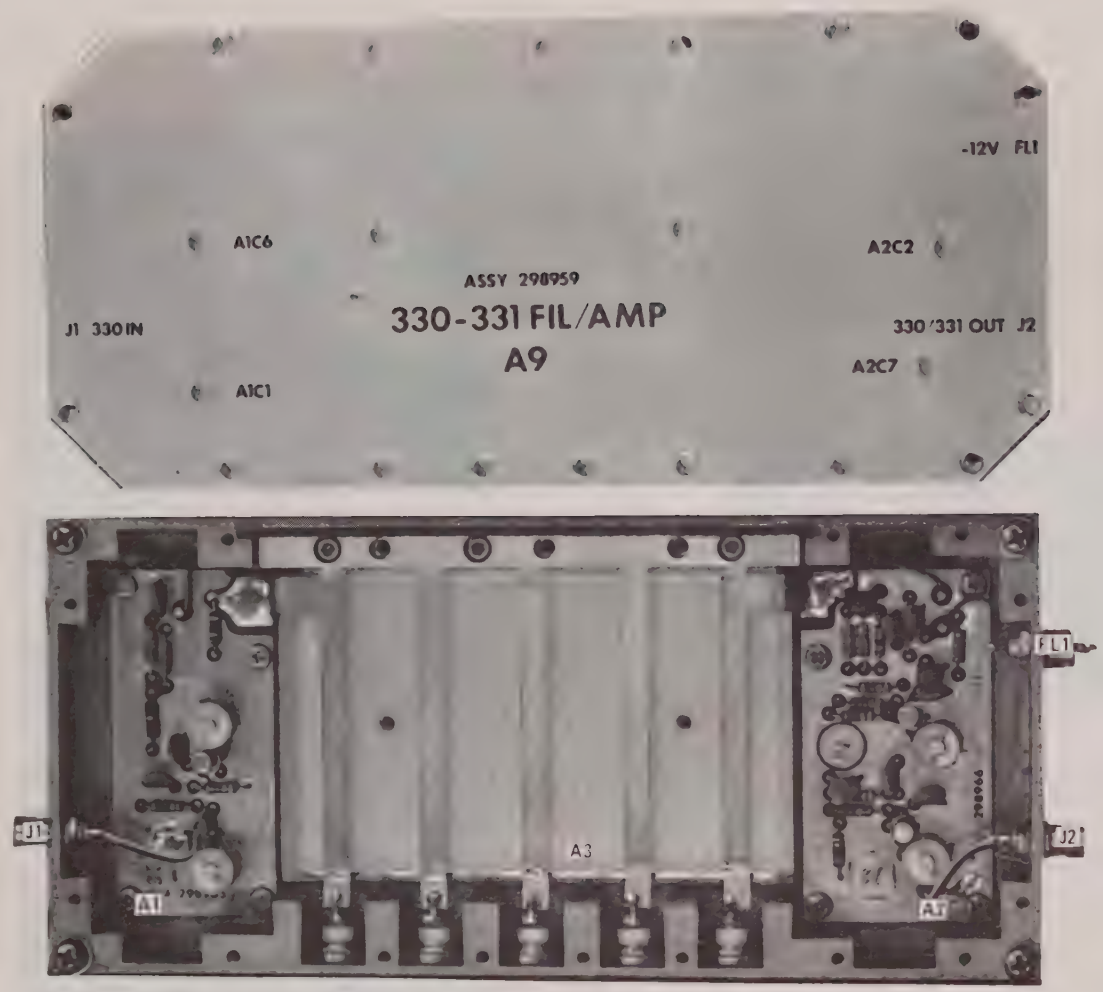


Figure 4-61. 330/331 MHz Filter Amplifier A9

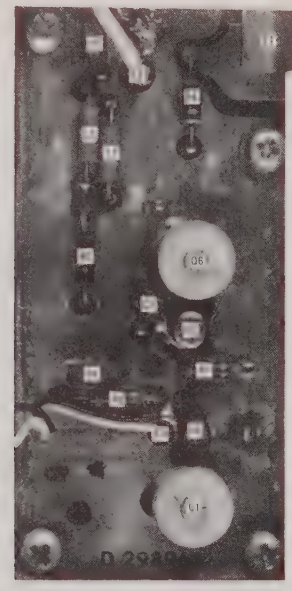


Figure 4-62. 330/331 MHz Filter Amplifier Input Board A9A1, Component Location

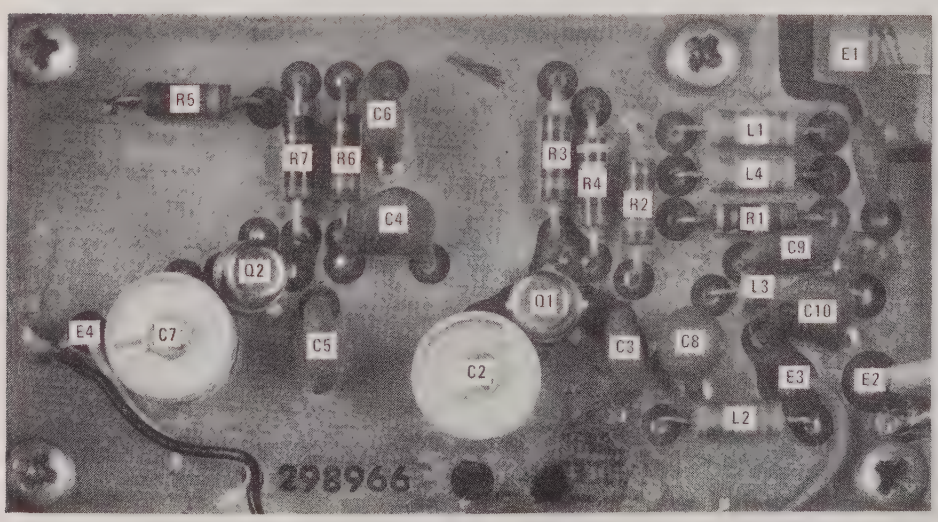


Figure 4-63. 330/331 MHz Filter Amplifier Output Board A9A2, Component Location

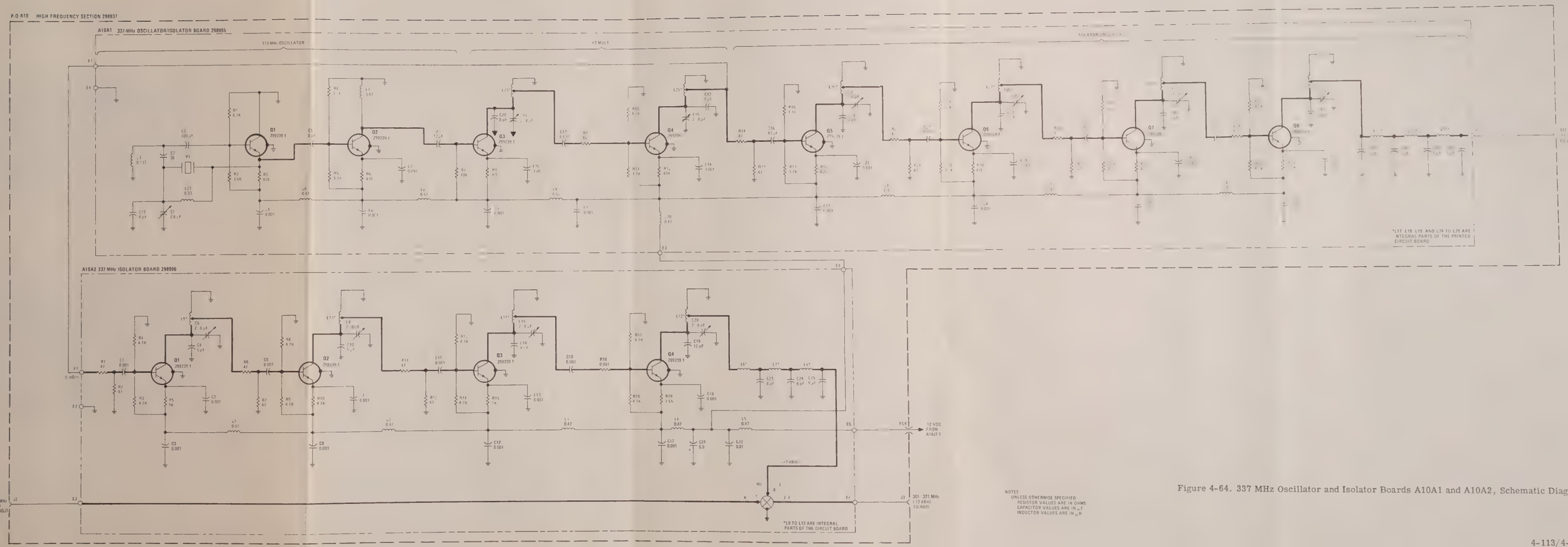

P.O A10 HIGH FREQUENCY SECTION 298937
A10A1 337 MHz OSCILLATOR/ISOLATOR BOARD 298995
113 MHz OSCILLATOR
x3 MULT
A10A2 337 MHz ISOLATOR BOARD 298996
Q1 2N3239
Q2 2N3239
Q3 2N3239
Q4 2N3239
Q5 2N3563
Q6 2N3563
Q7 2N3563
Q8 2N3563
*L17 L18 L19 AND L20 TO L25 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD
*L5 TO L12 ARE INTEGRAL PARTS OF THE CIRCUIT BOARD
12 VDC FROM A10J7
74-337 MHz +5 dBm FROM A6J1
351-371 MHz (12 dBm) TO A6J1
NOTES
UNLESS OTHERWISE SPECIFIED
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN μF
INDUCTOR VALUES ARE IN μH

Figure 4-64. 337 MHz Oscillator and Isolator Boards A10A1 and A10A2, Schematic Diagram

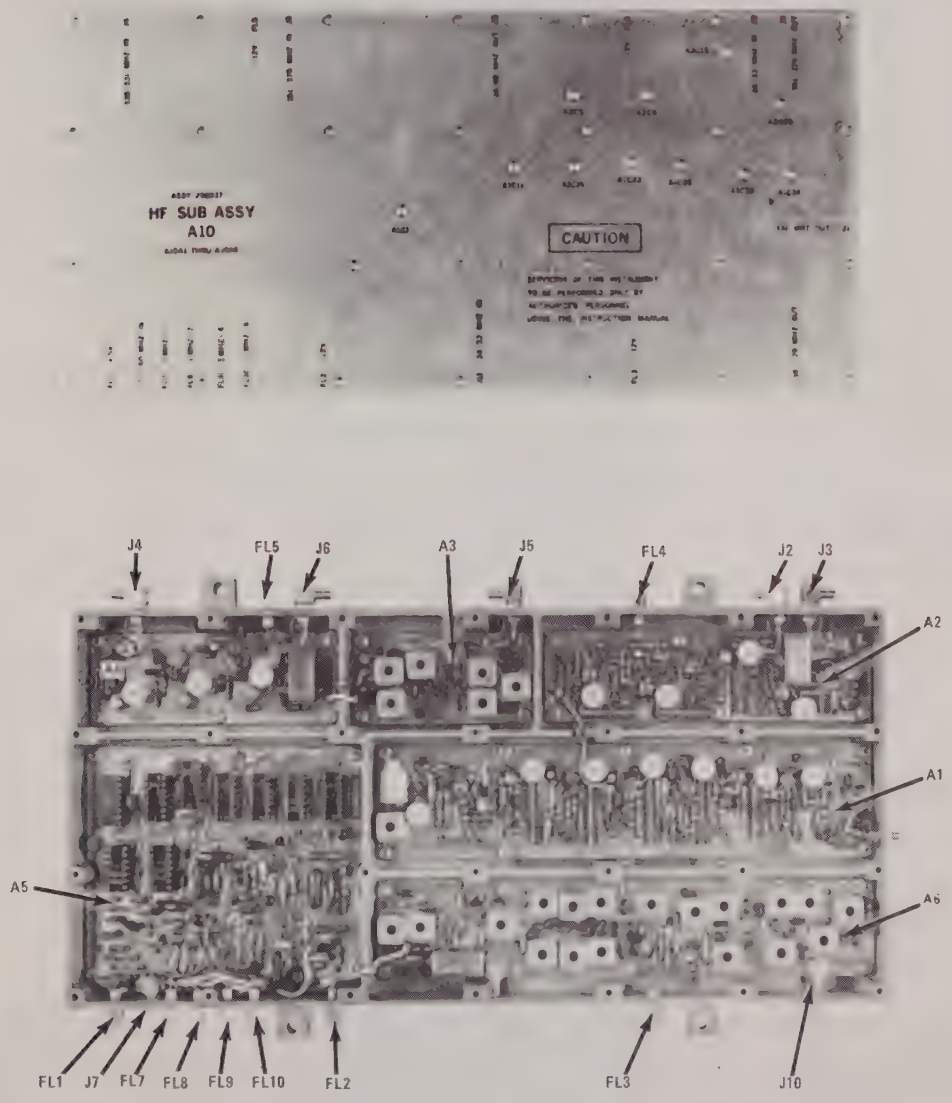


Figure 4-65. High Frequency Subassembly A10

4-135. 337 MHz OSCILLATOR ISOLATOR A10A1. (See Figures 4-64 and 4-66.)

4-136. This board contains a 112.3333 MHz crystal oscillator, a times three multiplier, and a four-stage active isolator. Y1 is a 112.3333 MHz crystal in an oscillator circuit formed by Q1 and associated components. Q2 is a 112-MHz amplifier which buffers and amplifies the oscillator output. Q3 and Q4 multiply this signal X3 producing 337 MHz.

4-137. At this point the 337-MHz signal is split two ways to drive two active isolators. One isolator is A10A2; the other is on this board. The isolator consists of four tuned amplifier stages followed by a 400-MHz low-pass filter. Amplifiers Q5-Q8, are tuned by the L-C circuits on each collector. The tuning capacitors for the isolator are C22, C26, C30, and C34, respectively. Each amplifier is separated by a resistive attenuator to increase the reverse isolation. Capacitors C36, C37, C38, and inductors L17, L18, and L19 comprise a 400-MHz low-pass filter to reject harmonics of the 337-MHz signal. The output level at A7J1 is +7 dBm.

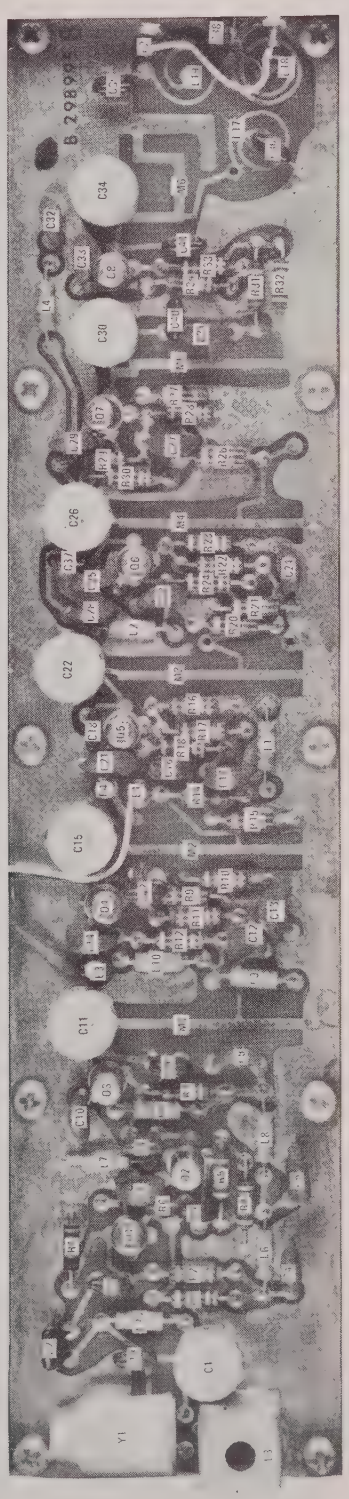
4-138. 337 MHz ISOLATOR BOARD A10A2. (See Figures 4-64 and 4-67.)

4-139. This board contains an active isolator similar to A10A1. There are four, tuned-amplifier stage attenuators. Each stage provides gain in the forward direction and about 20-dB isolation in the reverse direction. The stages are separated by resistive attenuators providing increased isolation. The signal from the 337-MHz oscillator board is applied to the input attenuator formed by R1 and R2. It is amplified by common emitter stage Q1. The collector of Q1 is tuned by L9 and the parallel combination of C4 and C5.

4-140. The output of Q1 goes through three more similar stages: Q2, Q3, and Q4. Each stage provides about 20-dB reverse isolation. The tuning capacitors are C5, C9, C15, and C20. Each one is tuned for a maximum output at the mixer local oscillator input. The output of the last stage feeds a 400-MHz low-pass filter consisting of L6 through L8 and C23 through C25. The output of the filter drives mixer M1. The other input to M1 comes from 24/33 MHz oscillator at A6J1. Mixer M1 combines two signals producing sum and difference frequencies. The upper sideband, 361-370 MHz, is selected by 361-370 MHz band-pass filter A8.

4-141. 30-40 MHz BAND PASS FILTER A10A3. (See Figures 4-68 and 4-69.)

4-142. The 30-40 MHz band-pass filter selects the lower sideband of the A10A2 mixer output and provides 14-dB gain for the desired signal. It consists of two identical bandpass filters with an amplifier separating the two. The first filter is formed by C1, C2, C3, C5, L1, L2, and L3. Transistor Q1 and associated components comprise the amplifier which drives the output filter formed by C7-C10 and L4-L6. The input and output impedance of this board are 50 ohms.


B 298995
C34
C30
C26
C22
C15
C11
C1
Y1
L4
L5
L6
L7
L8
L9
L10
L11
L12
L13
Q1
Q2
Q3
Q4
Q5
Q6
Q7
U1
U2
U3
U4
U5
U6
U7
U8
U9
U10
U11
U12
U13
U14
U15
U16
U17
U18
U19
U20
U21
U22
U23
U24
U25
U26
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U29
U30
U31
U32
U33
U34
U35
U36
U37
U38
U39
U40

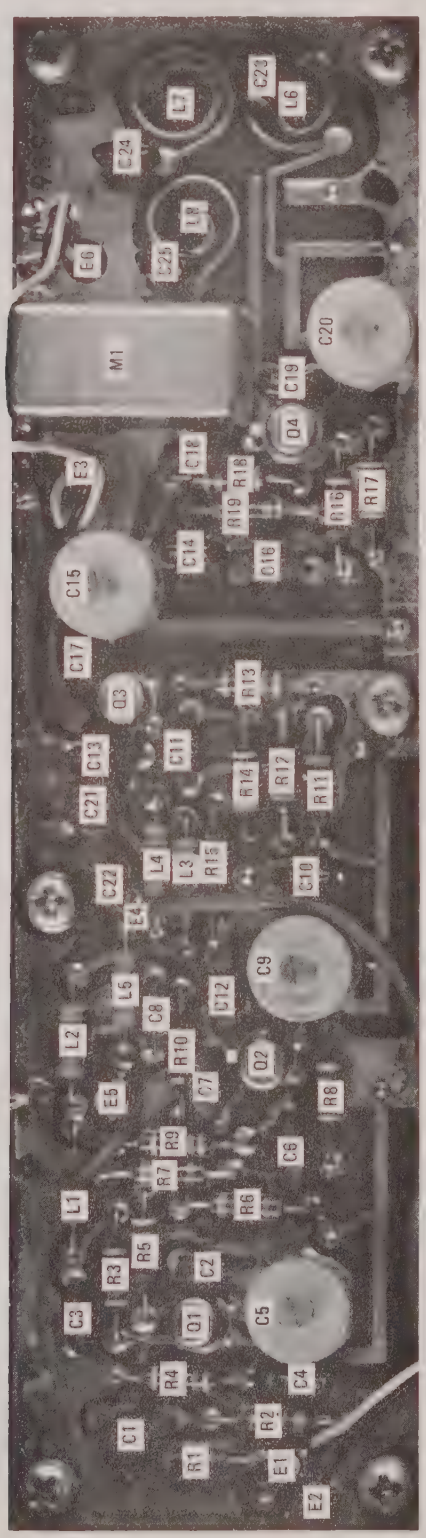


Figure 4-67. 337 MHz Isolator Board A10A2, Component Locations

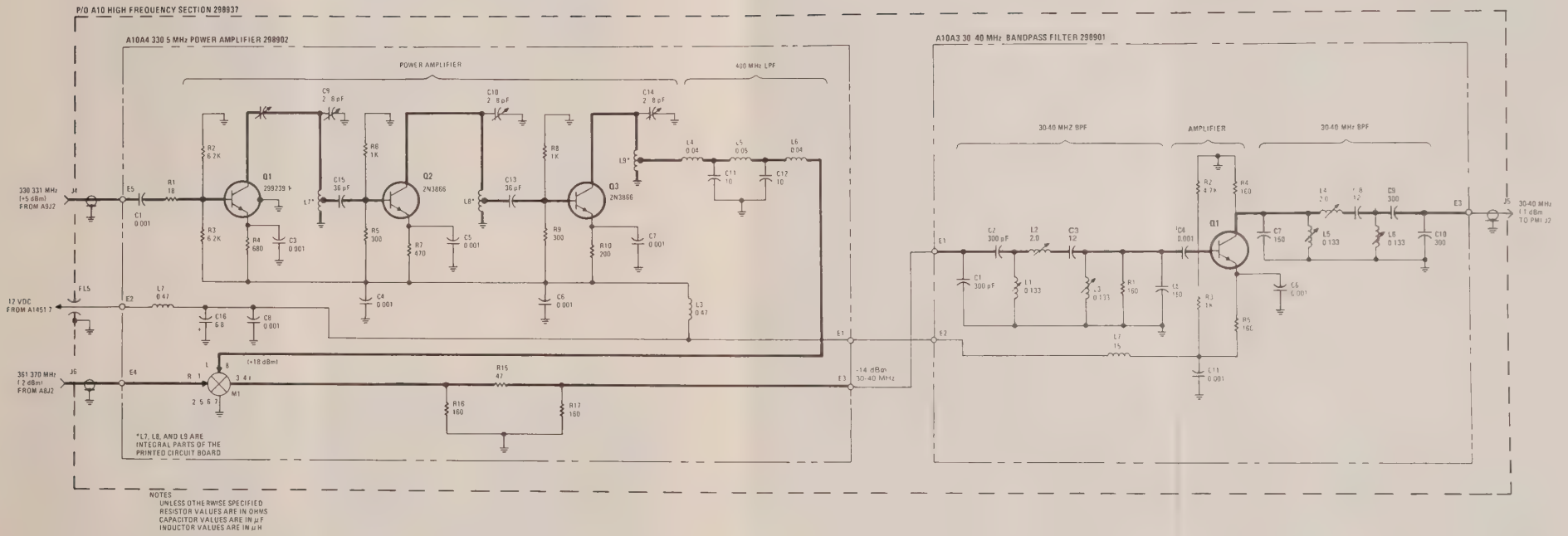

P/O A10 HIGH FREQUENCY SECTION 298937
A10A4 330 5 MHz POWER AMPLIFIER 298902
POWER AMPLIFIER
400 MHz LPF
A10A3 30 40 MHz BANDPASS FILTER 298901
30-40 MHZ BPF
AMPLIFIER
30-40 MHz BPF
330 331 MHz (+5 dBm) FROM A9J2
12 VDC FROM A1451 7
361 370 MHz (+2 dBm) FROM A8J2
(+18 dBm)
-14 dBm 30-40 MHz
30-40 MHz (+1 dBm TO PMI J2
*L7, L8, AND L9 ARE INTEGRAL PARTS OF THE PRINTED CIRCUIT BOARD
NOTES
UNLESS OTHERWISE SPECIFIED
RESISTOR VALUES ARE IN OHMS
CAPACITOR VALUES ARE IN µF
INDUCTOR VALUES ARE IN µH

Figure 4-68. 30/40 MHz and 330 MHz Amplifiers A10A3 and A10A4, Schematic Diagram

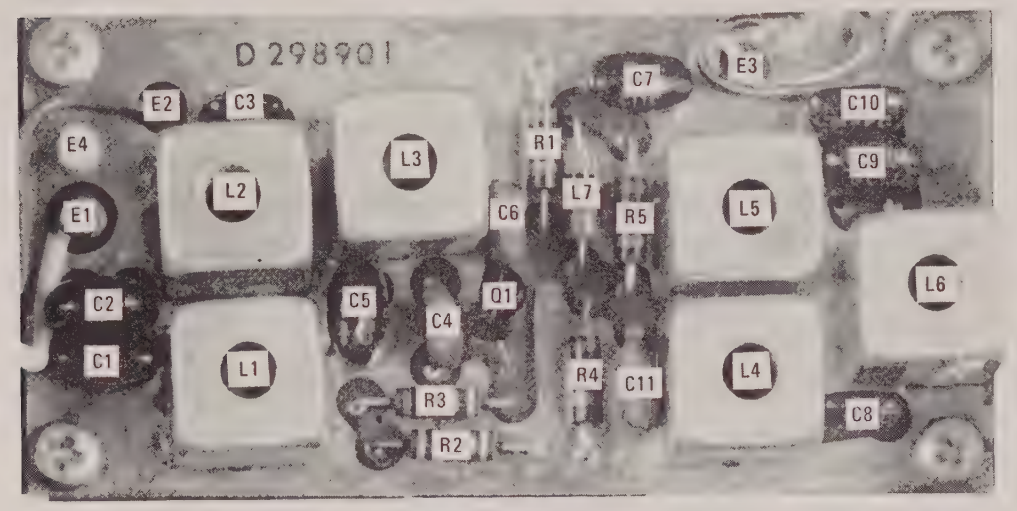


Figure 4-69. 30/40 MHz Filter Amplifier Board A10A3, Component Location

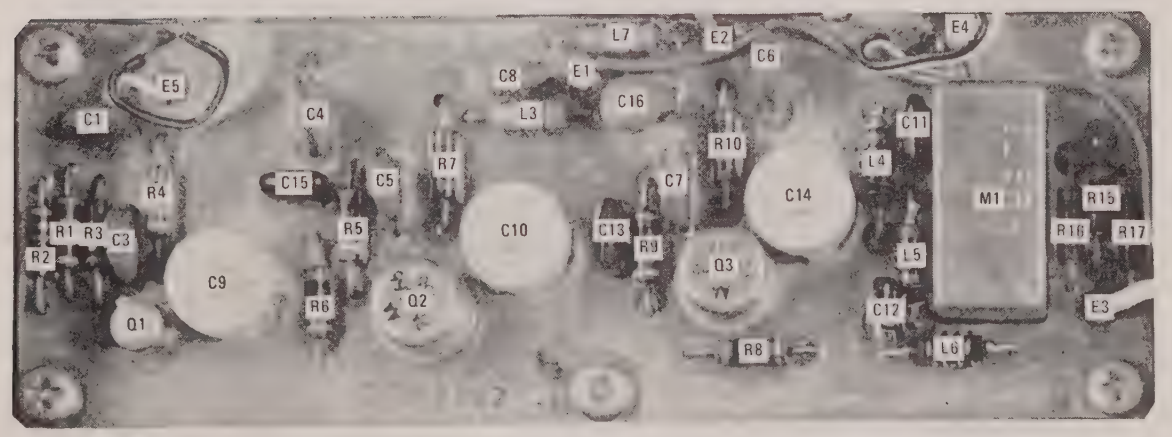


Figure 4-70. 330.5 MHz Power Amplifier Board A10A4, Component Locations

4-143. 330.5 MHz POWER AMPLIFIER A10A4. (See Figures 4-68 and 4-70.)

4-144. This unit amplifies the output of 330-331 MHz band-pass filter A9 to a level of +17 dBm, which is the local oscillator input to M1. The output of 361-370 MHz band-pass filter A8 is mixed with the signal in M1, producing the sum and difference frequencies. The 30-40 MHz difference frequency is the desired output of the frequency extender. Board A10A3 amplifies the 30-40 MHz and rejects all other mixer outputs.

4-145. The amplifier portion of this board consists of three stages. The first stage formed by Q1 and associated components is tuned by C9 and L7 providing 10 dB of gain at 330.5 MHz. This feeds 6-dB gain amplifier Q2 which is tuned by C10 and L8 to 330.5 MHz. The third 6-dB gain amplifier, Q3, develops the final power which is tuned by C14 and L9. The harmonics of final signal are removed by the 400-MHz low-pass filter formed by L4, L5, L6, C11, and C12.

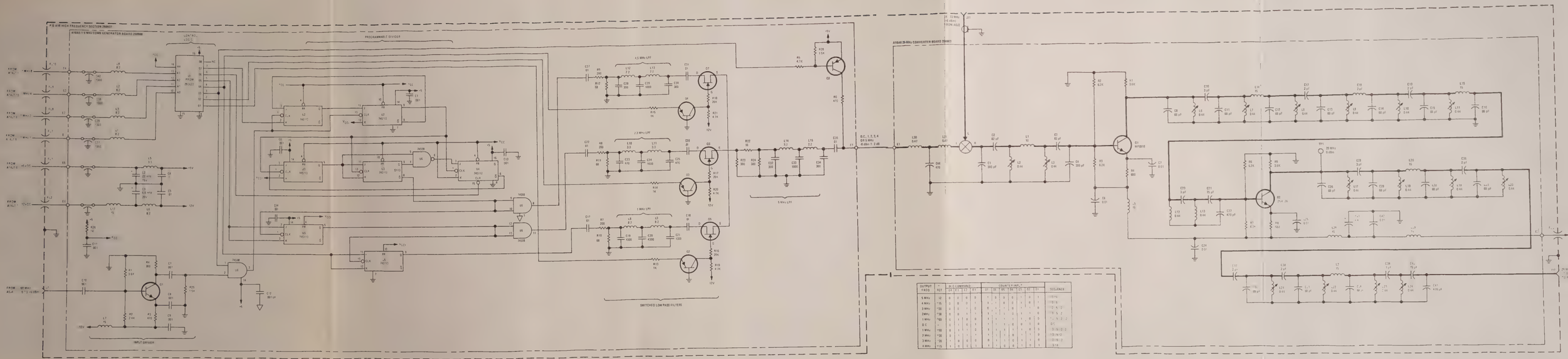
4-146. The signal from the local oscillator drives mixer M1 which mixes with the 361-370 MHz producing 30-40 MHz. The mixer IF output passes through a 6-dB attenuator. The output of the board is applied to A10A3.

4-147. 1-5 MHz COMB GENERATOR A10A5. (See Figures 4-71 and 4-72.)

4-148. This board contains a programmable divider and low-pass filters. It generates dc, 1, 2, 3, 4, or 5 MHz depending on the 1-MHz frequency control BCD digit. The 1-MHz digit appears on E1, E2, E3, E4, and A10 FL7, FL8, FL9, FL10, respectively. These logic signals are connected to U5, U6, U7, U8, and U9 which form the control logic for the programmable divider. Table 4-4 shows the output frequency for each input code as well as the various logic control signals required by the programmable divider.

TABLE 4-4. BCD CODE VERSUS OUTPUT FREQUENCY

BCD Digit	Input Code				divider function	U1-6 U1-5	U1-4	U1-3	U7-1	U9-6	U7-4	U8-10	U8-8	Font
	E4	E3	E2	E1										
0	0	0	0	0	12	1	1	1	0	0	0	1	1	5 MHz
1	0	0	0	1	15	1	0	0	0	0	0	1	1	4 MHz
2	0	0	1	0	20	0	0	1	1	0	1	0	1	3 MHz
3	0	0	1	1	30	1	0	0	1	0	1	0	1	2 MHz
4	0	1	0	0	60	1	0	0	1	1	0	0	1	1 MHz
5	0	1	0	1	-	1	0	0	1	0	1	0	0	0 MHz
6	0	1	1	0	60	1	0	0	1	1	0	0	1	1 MHz
7	0	1	1	1	30	1	0	0	1	0	1	0	1	2 MHz
8	1	0	0	0	20	0	0	1	1	0	1	0	1	3 MHz
9	1	0	0	1	15	1	0	0	0	0	0	1	1	4 MHz


A16A5 1.5 MHz COMB GENERATOR BOARD 259998
PROGRAMMABLE DIVIDER
INPUT BUFFER
4.5 MHz LPF
2.3 MHz LPF
1 MHz LPF
5 MHz LPF
SWITCHED LOW PASS FILTERS
A16A6 29-MHz CONVERTER BOARD 259903
TP1 29 MHz 0 dBm
TP2 29 MHz 0 dBm
J1 1.5 MHz 10 dBm FROM A16J2
J2 29 MHz 0 dBm TO A16J1

OUTPUT FREQ	PCT	PC COMPARE L4	L3	L2	L1	COUNTS IN PCT D7	D6	D5	D4	D3	D2	D1	SEQUENCE
5 MHz	10	0	0	0	0	1	0	0	1	0	0	1	10/9/1
4 MHz	15	0	0	0	1	1	0	1	0	0	1	0	11/10/2
3 MHz	20	0	0	1	0	0	1	0	0	1	0	0	12/4/3
2MHz	30	0	0	1	1	1	1	0	1	1	0	0	13/12/3
1 MHz	60	0	1	0	0	1	1	1	1	1	0	0	14/13/3
D.C.	-	0	1	1	0	1	1	1	1	1	1	0	15/14/3
1 MHz	60	0	1	1	1	1	1	1	1	1	1	1	15/14/3
2 MHz	30	1	0	0	0	1	1	1	1	0	1	1	15/13/2
3 MHz	20	1	0	0	1	1	1	1	0	0	1	0	15/8/2
4 MHz	15	1	0	1	0	1	1	0	0	1	0	1	9/4/2

Figure 4-71. 1-5 MHz Comb Generator A10A5 and 29 MHz Filter Converter A16A6, Schematic Diagram

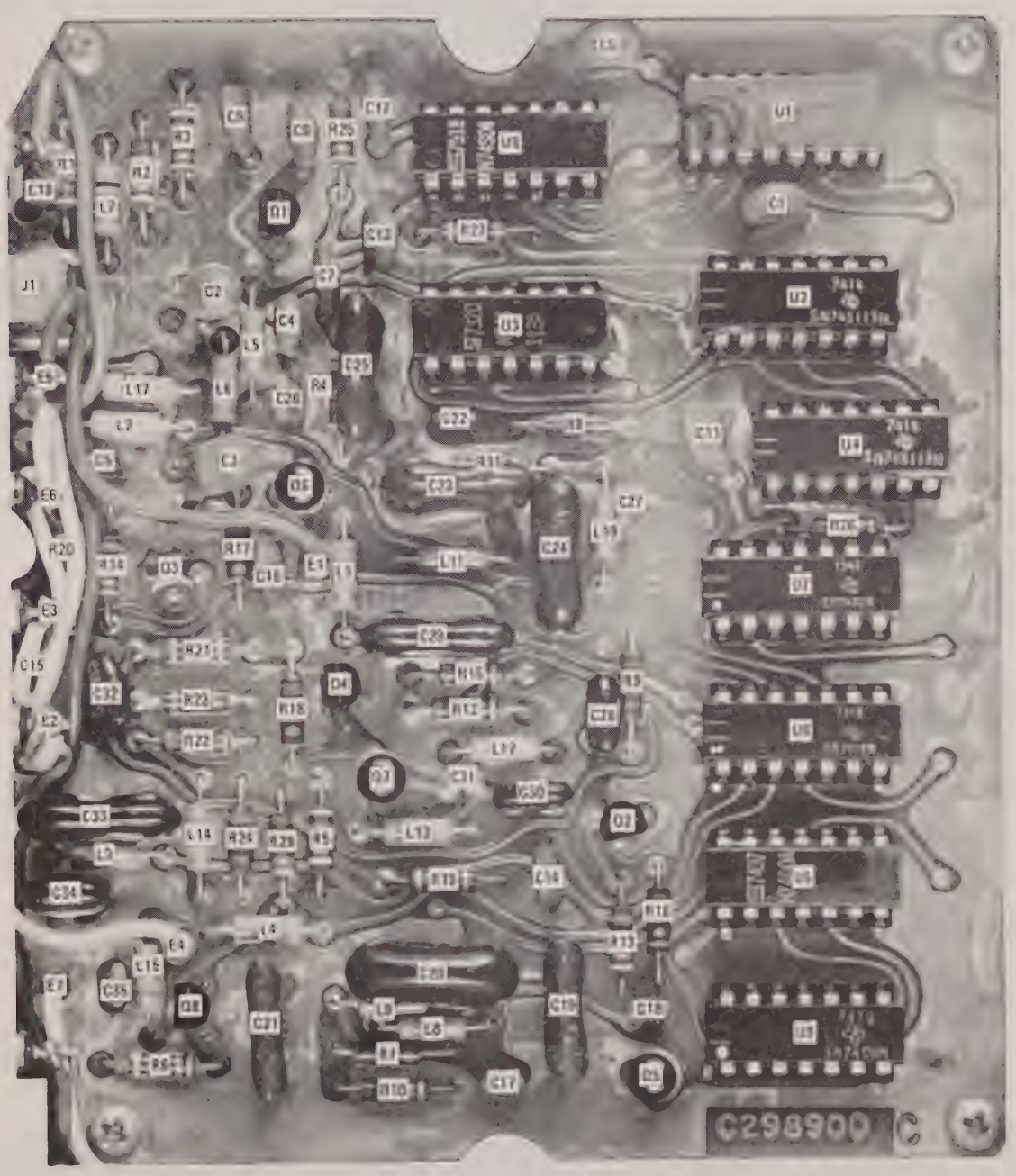


Figure 4-72. 1-5 MHz Comb Generator A10A5, Component Locations

4-149. The programmable divider output appears at U1-11. This output is divided by an additional 2 or 4 by U3A, or U3A and U3B, respectively, as required for 1-, 2-, and 3-MHz outputs.

4-150. The 60 MHz from the fixed frequency generator A5 is applied to driver Q1 which buffers the 60 MHz and drives U1. U1 in combination with U2 and U4 form the programmable divider.

4-151. U1 is a programmable binary counter which is set up to divide the 60-MHz input frequency by 10, 12, or 15 as determined by the BCD digit input control logic. U2 and U4 are used to detect the positive edge of the Q_D, U1 pin 11 of the counter and two counts later outputs a pulse to the parallel entry (PE) input of the counter which is synchronously programmed with the starting count.

4-152. As indicated in the truth table, the counter output is the first stage of the divide sequence. Some input digits require an additional divide by 2 or 4 which is provided by U3. Each of these flip-flops is controlled by outputs from the control logic.

4-153. The output of the programmable divider appears at U3 pin 6 for 1 MHz, U3 pin 8 for 2 and 3 MHz, and U1 pin 11 for 4 and 5 MHz, depending on which frequency is programmed. The outputs are square waves and need filtering before the final output is useable. Transistors Q5, Q6, and Q7 form a single-pole, three-throw FET switch which selects the appropriate low-pass filter output. This output passes through a 3-dB attenuator formed by R22 through R24 and a final low-pass filter consisting of L14 and L15 and C32 through C34. Transistor Q8 is turned on only when the output is required to be a dc level. The output of the comb generator feeds the 29-MHz converter at a level of -8 dBm.

4-154. 29 MHz FILTER CONVERTER A10A6. (See Figures 4-71 and 4-73.)

4-155. This board mixes the dc to 5-MHz output of A10A5 with the 24 to 33 MHz output of A6 producing 29 MHz. The 29 MHz is amplified and filtered to eliminate all signals 1 MHz and more away from 29 MHz.

4-156. The input from A10A5 at E1 passes through the low-pass filter formed by L30, L31, and C44. This reduces high frequency harmonics which may be present on the 1 to 5 MHz signal. This signal mixes with 24 to 33 MHz from A6 in M1. The 29-MHz sideband is selected by the two-pole band-pass filter formed by C1 through C4 and L1 through L3. The 29 MHz is amplified by Q1 which drives an eight pole band-pass filter consisting of C8, C10-C22, and L6-L15. The output of this filter is amplified by Q2 which drives another eight pole band-pass filter. This second eight pole filter is formed by C26, C28-C34, C36-C41,

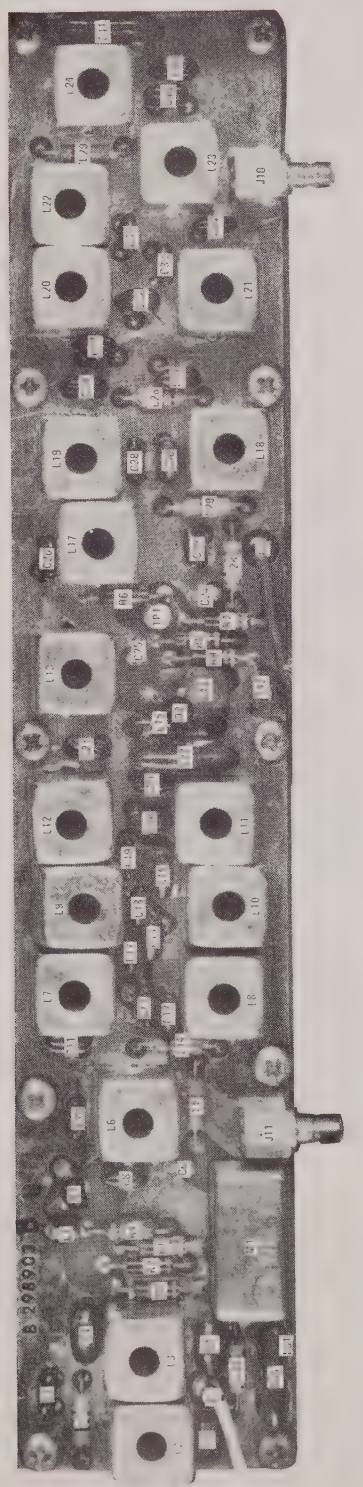


Figure 4-73. 29 MHz Filter Converter A10A6, Component Locations

L17-L24, L26, and L27. The output of this board is at a level of -7 dBm and goes to the plug-in interface connector to drive the optional modulator. The output of the modulator, also 29 MHz, goes to the 366 MHz filter amplifier A7.

4-157. MAINFRAME CALIBRATION ADJUSTMENTS

4-158. +5.2 VOLTS

a. Connect digital voltmeter between +5.2 volt test point on A14 and chassis ground. Turn system on.
b. Adjust A11A2R10 until digital voltmeter reads +5.20 volts ± 10 mV.

4-159. -12.0 VOLTS

a. Connect digital voltmeter between -12.0 volt test point on A14 and chassis ground. Turn system on.
b. Adjust A11A3R9 until digital voltmeter reads -12.00 volts ± 10 mV.

4-160. FREQUENCY EXTENDER ADJUSTMENTS

4-161. 24-33 MHz OSCILLATOR FREQUENCY

a. Connect frequency counter to A6J2.
b. Turn unit on and set front panel frequency select switches to 30.0000000 MHz.
c. Adjust A6A1C19 until frequency counter reads 24.000 MHz ± 30 kHz.
d. Switch 1 MHz switch from 0 to 9 in 1 MHz steps. Adjust the appropriate capacitor until frequency counter reads the nominal oscillator frequency to within ± 30 kHz. (See Table 4-5.)

TABLE 4-5. NOMINAL OSCILLATOR FREQUENCIES

Frequency Selected (MHz)	Nominal Frequency At A6J2 (MHz)	Adjustment Capacitor on A6A1
30.0000000	24	C19
31.0000000	25	C35
32.0000000	26	C39
33.0000000	27	C15
34.0000000	28	C11
35.0000000	29	C7
36.0000000	30	C3
37.0000000	31	C23
38.0000000	32	C27
39.0000000	33	C31

4-162. BANDPASS FILTERS

4-163. There are three stripline band-pass filters in the frequency extender module. Each filter is incorporated in a module containing amplifiers, mixers, etc. All of the filters are synchronously tuned for minimum insertion loss across the frequency band required. Adjustments can be made with the bottom cover removed by lifting each filter up, but leaving all wires and cables connected. The minimum 3-dB bandwidth of each filter is summarized below:

A Number	Unit Name	Minimum 3 dB Bandwidth
A7	366 MHz Filter Converter	3 MHz
A8	361-370 MHz Filter Amplifier	12 MHz
A9	330/331 MHz Filter Amplifier	3 MHz

4-164. 366 MHz FILTER AMPLIFIER A7 (298961)

a. Set frequency of synthesizer to 35.5000000 MHz.
b. Connect spectrum analyzer to A7A3 and tune analyzer to 330.5 MHz.
c. Adjust filter tuning capacitor to maximize the signal.
d. The level should be greater than -18 dBm. If it is not, refer to the frequency extender troubleshooting chart for more information.

4-165. A8 361-370 MHz FILTER AMPLIFIER A8 (298954)

a. Connect spectrum analyzer to A8J2 and tune analyzer to 366 MHz.
b. Set frequency synthesizer to 35.0000000 MHz.
c. Tune filter adjustment capacitors to maximize the signal at 366 MHz.
d. Set synthesizer to 30.0000000 MHz and then 39.0000000 MHz.
e. The signal should move from 361 to 370 MHz and remain above -5 dBm across the band.

Note

The filter adjustment and amplifier capacitors should be used to maximize the signal across this band.

4-166. A9 330-331 MHz FILTER AMPLIFIER A9 (298959)

a. Connect A9J2 to a spectrum analyzer and tune analyzer to 330.5 MHz.
b. Set synthesizer for 35.5 MHz.
c. Tune filter adjustment capacitors and amplifier tuning capacitors to maximize this signal.
d. The level should be greater than -4 dBm. If it is not, refer to the frequency extender troubleshooting chart for more information.

CHAPTER 5

REPLACEABLE PARTS LIST

5-1. INTRODUCTION

5-2. This chapter contains the replaceable parts list for the AILTECH 360D11 Mainframe and 3600E1 Frequency Extender (Figure 5-1). The parts list is a reproduction of an actual computer printout presented in reference designation order. The parts list contains the reference designation, AILTECH part number, quantity, description, manufacturers code, and manufacturers part number. Table 5-1 lists manufacturers by manufacturers code.

5-3. The mainframe parts (A1-A5, A11, A12, and A14) are listed on pages 5-2 through 5-17. The frequency extender parts (A6-A10) are listed on pages 5-18 through 5-25.

Figure 5-1. AILTECH 360D11 Mainframe and 3600E1 Frequency Extender

Table 5-1. Federal Supply Code Manufacturer (FSCM)

Vendor Name	Vendor Code	Vendor Address
Amp	00779	Harrisburg, Pa., 29671
Allen Bradley	01121	Milwaukee, Wisc., 53204
Texas Instruments	01295	Dallas, Texas, 75231
Amphenol	02660	Broadville, Ill., 60152
Motorola	04713	Syracuse, N.Y., 13201
Kemet	05397	Greenville, S.C., 29606
Viking	05574	Chattsworth, Calif., 91311
Prototype Transformer	05853	E. Orange, N.J., 07017
Milross	07047	Southampton, Penn., 18966
Vemaline	08730	Wykoff, N.J.
Thermalloy	13103	Dallas, Texas, 75247
Sensitron	13409	Deer Park, N.Y., 11729
Cornell Dubilier	14655	Newark, N.J., 07105
Mini Ckts. Lab.	15542	Brooklyn, N.Y., 11203
Cablewave Systems	16733	N. Haven, Ct., 06473
Signetics	18324	Sunnyvale, Calif., 94086
Avantek	24539	Santa Clara, Calif., 95051
Hewlett-Packard	28480	Rockaway, N.J., 07886
IMC Magnetics	28875	Rochester, N.H., 03867
Transtector Systems	30992	Monterey Park, Calif., 91754
Stettner Trush	52763	
Sprague	56289	551 Marshall St. North Adams, Ma.
CTC	71279	Milwaukee, Wisc., 53201
Elmenco	72136	Willimantic, Ct., 06226
Fairchild	72314	Mtn. View, Calif., 94040
Erie	72982	Erie, Pa., 16512
Littlefuse	75915	Des Plaines, Ill., 60016
Bourns	80294	Riverside, Calif., 92507
Barry	81860	Broadway, N.Y., 10012
Babcock	82050	161 E. 42nd St., N.Y. New York 10017
Johanson	91293	Boonton, N.J., 07005
Augat	91506	Attleboro, Ma., 02703
Dale	91637	Columbus, Ne., 69153
ELCO	91662	Willow Grove, Pa., 19090
Republic Electronics	93985	Paterson, N.J.
Weston	94271	Newark, N.J., 07114
ALCO	95146	N. Andover, Ma., 01845
Vitramon	95275	Bridgeport, Ct., 06601
Microwave Assoc.	96341	Burlington, Ma., 01803
Selectro	98291	Mamaronek, N.J., 10544
Teledyne	98571	Hawthorne, Calif., 90250
Delevan	99800	E. Aurora, N.Y., 14052

Reference Designation		AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A1		298931		ASSY, FRONT PANEL	00752	298931
A1	CR1	293274	3	DIODE:LIGHT EMITTING GREEN	28480	5082-4955
A1	CR2	293272	1	DIODE:LIGHT EMITTING YELLOW	28480	5082-4555
A1	CR3	293274		DIODE:LIGHT EMITTING GREEN	28480	5082-4955
A1	CR4	293274		DIODE:LIGHT EMITTING GREEN	28480	5082-4955
A1	S1	294544	1	SWITCH:4 PDT	95146	MTA-406W
A1	S2	294543	1	SWITCH:SPDT	95146	MTA-106D
A1A1		299202		PWB ASSY, FREQ SELECT SWITCH MOTHERBD	00752	299202
A1A1	E1	293050	2	HEADER:DOUBLE ROW STRAIGHT POST 26 PIN	00779	61137-1
A1A1	E2	293050		HEADER:DOUBLE ROW STRAIGHT POST 26 PIN	00779	61137-1
A1A1	J1	299932	4	HEADER:DOUBLE ROW STRAIGHT POST 26 POS	00779	1-87227-5
A1A1	J2	299932		HEADER:DOUBLE ROW STRAIGHT POST 26 POS	00779	1-87227-5
A1A1	S1	299262	1	SWITCH:FREQ SELECT	00752	299262
A2		298933		ASSY, LOWER ORDER BCD	00752	298933
A2A1		299204		PWB ASSY, FIXED TUNED BCD (1 KHZ)	00752	299204
A2A1	C1	299243-001	135	CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C2	299241-001	56	CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C3	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C4	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C5	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C6	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C7	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C8	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C9	299241-200	31	CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A2A1	C10	299241-101	34	CAP:FXD DIP MICA 100PF +-5% 300WVDC	72136	DM5-101J
A2A1	C11	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A2A1	C12	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C13	299241-430	40	CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A2A1	C14	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A2A1	C15	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C16	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C17	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C18	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C19	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C20	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C21	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C22	299241-100	28	CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A2A1	C23	299241-680	24	CAP:FXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A2A1	C24	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A2A1	C25	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C26	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C27	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A2A1	C28	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A2A1	C29	299250-131	19	CAP:FXD DIP MICA 130PF +-5% 500WVDC	14655	CM04FD131J03
A2A1	C30	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C31	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C32	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C33	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C34	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C35	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C36	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C37	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C38	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C39	299241-120	13	CAP:FXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A2A1	C40	299241-750	11	CAP:FXD DIP MICA 75PF +-5% 300WVDC	72136	DM5-750J
A2A1	C41	299241-120		CAP:FXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A2A1	C42	299245-001	19	CAP:FXD CER .1UF +-20% 50WVDC	72982	8121-M058-W5R0-104M
A2A1	C43	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A2A1	C44	299250-241	35	CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A2A1	C45	299250-151	6	CAP:FXD DIP MICA 150PF +-5% 500WVDC	14655	CM04FD151J03
A2A1	C46	299250-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A2A1	C47	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C48	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C49	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C50	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C51	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C52	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C53	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C54	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A2A1	C55	299241-680		CAP:FXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A2A1	C56	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A2A1	C57	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A2A1	C58	299241-680		CAP:FXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A2A1	C59	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A2A1	C60	299245-001		CAP:FXD CER .1UF +-20% 50WVDC	72982	8121-M058-W5R0-104M
A2A1	C61	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A2A1	C62	299241-270	7	CAP:FXD DIP MICA 27PF +-5% 300WVDC	72136	DM5-270J
A2A1	C63	299250-131		CAP:FXD DIP MICA 130PF +-5% 500WVDC	14655	CM04FD131J03
A2A1	C64	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A2A1	C65	299250-131		CAP:FXD DIP MICA 130PF +-5% 500WVDC	14655	CM04FD131J03
A2A1	C66	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C67	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C68	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C69	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C70	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C71	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C72	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C73	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C74	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A2A1	C75	299246-002	7	CAP:FXD DIP TA 22UF +-20% 15WVDC	05397	T368B226M015AS
A2A1	C76	299240-001	9	CAP:FXD DIP TA 6.8UF +-20% 35WVDC	05397	T368B685M035AS
A2A1	C77	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C78	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A1	C79	299250-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A2A1	C80	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A2A1	CR1	299251-001	17	DIODE:SIGNAL	72314	IN4009
A2A1	CR2	299251-001		DIODE:SIGNAL	72314	IN4009
A2A1	CR3	299251-001		DIODE:SIGNAL	72314	IN4009
A2A1	CR4	299251-001		DIODE:SIGNAL	72314	IN4009
A2A1	CR5	299251-001		DIODE:SIGNAL	72314	IN4009
A2A1	CR6	299251-001		DIODE:SIGNAL	72314	IN4009
A2A1	CR7	299251-001		DIODE:SIGNAL	72314	IN4009
A2A1	CR8	299251-001		DIODE:SIGNAL	72314	IN4009
A2A1	E1	293310	61	TERMINAL SOLDER	71279	1597-2-01
A2A1	L1	299237-026	16	INDUCTOR:FXD MOLDED 1.8UH	99800	1025-026
A2A1	L2	299237-026		INDUCTOR:FXD MOLDED 1.8UH	99800	1025-026

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A2A1 L8	299237-038	99	INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L9	299237-032	38	INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A2A1 L5	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A2A1 L6	299237-022	22	INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
A2A1 L7	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
A2A1 L8	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L9	299237-028	10	INDUCTORIFXD MOLDED 2.2UH	99800	1025-028
A2A1 L10	299237-028		INDUCTORIFXD MOLDED 2.2UH	99800	1025-028
A2A1 L11	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L12	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L13	299237-024	34	INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A2A1 L14	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A2A1 L15	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A2A1 L16	299237-026		INDUCTORIFXD MOLDED 1.8UH	99800	1025-026
A2A1 L17	299237-020	27	INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
A2A1 L19	299237-026		INDUCTORIFXD MOLDED 1.8UH	99800	1025-026
A2A1 L20	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L21	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A2A1 L22	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A2A1 L23	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A2A1 L24	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A2A1 L25	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L26	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
A2A1 L27	299237-020		INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
A2A1 L28	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
A2A1 L29	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
A2A1 L30	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L31	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L32	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A2A1 L33	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A2A1 L34	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A2A1 Q1	294172	128	TRANSISTORINPN SI	04713	MPS918
A2A1 Q2	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q3	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q4	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q5	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q6	294153	42	TRANSISTORIPNP SI	04713	2N4126
A2A1 Q7	294153		TRANSISTORIPNP SI	04713	2N4126
A2A1 Q8	294151	34	TRANSISTORINPN SI	04713	2N4124
A2A1 Q9	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q10	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q11	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q12	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q13	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q14	294153		TRANSISTORIPNP SI	04713	2N4126
A2A1 Q15	294153		TRANSISTORIPNP SI	04713	2N4126
A2A1 Q16	294151		TRANSISTORINPN SI	04713	2N4124
A2A1 Q17	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q18	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q19	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q20	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q21	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q22	294153		TRANSISTORIPNP SI	04713	2N4126
A2A1 Q23	294153		TRANSISTORIPNP SI	04713	2N4126
A2A1 Q24	294151		TRANSISTORINPN SI	04713	2N4124
A2A1 Q25	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q26	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q27	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q28	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q29	294172		TRANSISTORINPN SI	04713	MPS918
A2A1 Q30	294153		TRANSISTORIPNP SI	04713	2N4126
A2A1 Q31	294153		TRANSISTORIPNP SI	04713	2N4126
A2A1 Q32	294151		TRANSISTORINPN SI	04713	2N4124
A2A1 Q33	294151		TRANSISTORINPN SI	04713	2N4124
A2A1 Q34	294151		TRANSISTORINPN SI	04713	2N4124
A2A1 Q35	294151		TRANSISTORINPN SI	04713	2N4124
A2A1 R1	299701-470	28	RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A1 R3	299701-102	110	RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R4	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R5	299701-4?1	34	RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A2A1 R6	299701-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A1 R7	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R8	299701-472	27	RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A2A1 R9	299701-152	71	RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R10	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R11	299701-103	26	RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A2A1 R12	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R13	299701-681	46	RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A2A1 R14	299701-101	59	RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A2A1 R15	299701-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A1 R17	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R18	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R19	299701-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A2A1 R21	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R24	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R25	299701-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A2A1 R26	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R27	299701-622	36	RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A2A1 R28	299701-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A2A1 R29	299701-301	18	RESISTORIFXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A2A1 R30	299701-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A1 R32	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R33	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R34	299701-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A2A1 R36	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R37	299701-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A2A1 R38	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R39	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R40	299701-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A2A1 R41	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R42	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A2A1 R45	299701-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A2A1 R44	299701-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A2A1 R45	299701-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A1 R47	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R48	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R49	299701-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A2A1 R50	299701-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A1 R51	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A1 R52	299701-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A2A1 R53	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A1 R54	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A2A1 R55	2997C1-103		RESISTORIFXD CAR 10K ~+5% 1/4W	01121	KC07GF103J
A2A1 R56	2997C1-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	KC07GF152J
A2A1 R57	2997C1-681		RESISTORIFXD CAR 680 OHM ~+5% 1/4W	01121	KC07GF681J
A2A1 R58	2997C1-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	KC07GF622J
A2A1 R59	2997C1-681		RESISTORIFXD CAR 680 OHM ~+5% 1/4W	01121	KC07GF681J
A2A1 R60	2997C1-681		RESISTORIFXD CAR 680 OHM ~+5% 1/4W	01121	KC07GF681J
A2A1 R61	2997C1-471		RESISTORIFXD CAR 470 OHM ~+5% 1/4W	01121	KC07GF471J
A2A1 R62	2997C1-362	30	RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	KC07GF362J
A2A1 R63	2997C1-391	28	RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	KC07GF391J
A2A1 R64	2997C1-242	26	RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	KC07GF242J
A2A1 R65	2997C1-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	KC07GF391J
A2A1 R66	2997C1-362		RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	KC07GF362J
A2A1 R67	2997C1-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	KC07GF391J
A2A1 R68	2997C1-242		RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	KC07GF242J
A2A1 R69	2997C1-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	KC07GF391J
A2A1 R70	2997C1-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	KC07GF622J
A2A1 R71	2997C1-100		RESISTORIFXD CAR 10 OHM ~+5% 1/4W	01121	KC07GF100J
A2A1 R72	2997C1-100		RESISTORIFXD CAR 10 OHM ~+5% 1/4W	01121	KC07GF100J
A2A1 TP1	293159	4	TEST POINT	00779	2-582118-8
A2A1 U1	293355	8	IC:LIN MIXER	01295	SN76514N
A2A1 U2	293350	15	IC:TTL DUAL J-K FF	01295	SN74S113N
A2A1 U3	293355		IC:LIN MIXER	01295	SN76514N
A2A1 U4	293350		IC:TTL DUAL J-K FF	01295	SN74S113N
A2A1 U5	293355		IC:LIN MIXER	01295	SN76514N
A2A1 U6	293350		IC:TTL DUAL J-K FF	01295	SN74S113N
A2A1 U7	293355		IC:LIN MIXER	01295	SN76514N
A2A1 U8	293496	5	IC:TTL DECADE COUNTER	18324	82S90
A2A1	294566		SOCKET:IC 14 PIN	01295	C931410
A2A2	299234		PWB ASSY, BCD FIXED TUNED 0.1 TO 100 MZ	00752	299234
A2A2 C1	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A2A2 C2	299244-001		CAP:FXD CER DISC .01UF ~+20% 1000WVDC	56289	C023F501C103Z
A2A2 C3	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A2A2 C4	299244-001		CAP:FXD CER DISC .01UF ~+20% 1000WVDC	56289	C023F501C103Z
A2A2 C5	299244-001		CAP:FXD CER DISC .01UF ~+20% 1000WVDC	56289	C023F501C103Z
A2A2 C6	299244-001		CAP:FXD CER DISC .01UF ~+20% 1000WVDC	56289	C023F501C103Z
A2A2 C7	299244-001		CAP:FXD CER DISC .01UF ~+20% 1000WVDC	56289	C023F501C103Z
A2A2 C8	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A2A2 C9	299241-200		CAP:FXD DIP MICA 20PF ~+5% 300WVDC	72136	DM5-200J
A2A2 C10	299241-101		CAP:FXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A2A2 C11	299241-200		CAP:FXD DIP MICA 20PF ~+5% 300WVDC	72136	DM5-200J
A2A2 C12	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C13	299241-430		CAP:FXD DIP MICA 43PF ~+5% 300WVDC	72136	DM5-430J
A2A2 C14	299241-430		CAP:FXD DIP MICA 43PF ~+5% 300WVDC	72136	DM5-430J
A2A2 C15	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C16	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A2A2 C17	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C18	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C19	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C20	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	CK60AW102M
A2A2 C21	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	72136	DM5-100J
A2A2 C22	299241-100		CAP:FXD DIP MICA 10PF ~+0.5PF 300WVDC	72136	DM5-680J
A2A2 C23	299241-680		CAP:FXD DIP MICA 68PF ~+5% 300WVDC	56289	C023F501C103Z
A2A2 C25	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C26	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	72136	DM5-200J
A2A2 C27	299241-200		CAP:FXD DIP MICA 20PF ~+5% 300WVDC	72136	DM5-200J
A2A2 C28	299241-200		CAP:FXD DIP MICA 20PF ~+5% 300WVDC	14655	CM04FD131J03
A2A2 C29	299250-131		CAP:FXD DIP MICA 130PF ~+5% 500WVDC	56289	CK60AW102M
A2A2 C30	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	56289	C023F501C103Z
A2A2 C31	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C32	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	CK60AW102M
A2A2 C33	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	56289	C023F501C103Z
A2A2 C34	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C35	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C36	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C37	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	CK60AW102M
A2A2 C38	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	72136	DM5-120J
A2A2 C39	299241-120		CAP:FXD DIP MICA 12PF ~+5% 300WVDC	72136	DM5-750J
A2A2 C40	299241-750		CAP:FXD DIP MICA 75PF ~+5% 300WVDC	72136	DM5-120J
A2A2 C41	299241-120		CAP:FXD DIP MICA 12PF ~+5% 300WVDC	72982	8121-M058-W5R0-1P4M
A2A2 C42	299245-001		CAP:FXD CER .1UF ~+20% 50WVDC	72136	DM5-430J
A2A2 C43	299241-430		CAP:FXD DIP MICA 43PF ~+5% 300WVDC	14655	CM04FD241J03
A2A2 C44	299250-241		CAP:FXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD151J03
A2A2 C45	299250-151		CAP:FXD DIP MICA 150PF ~+5% 500WVDC	14655	CM04FD241J03
A2A2 C46	299250-241		CAP:FXD DIP MICA 240PF ~+5% 500WVDC	56289	C023F501C103Z
A2A2 C47	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	CK60AW102M
A2A2 C48	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	56289	C023F501C103Z
A2A2 C49	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C50	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C51	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C52	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	CK60AW102M
A2A2 C53	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	72136	DM5-100J
A2A2 C54	299241-100		CAP:FXD DIP MICA 10PF ~+0.5PF 300WVDC	72136	DM5-680J
A2A2 C55	299241-680		CAP:FXD DIP MICA 68PF ~+5% 300WVDC	72136	DM5-100J
A2A2 C56	299241-100		CAP:FXD DIP MICA 10PF ~+0.5PF 300WVDC	72136	DM5-100J
A2A2 C57	299241-100		CAP:FXD DIP MICA 10PF ~+0.5PF 300WVDC	72136	DM5-680J
A2A2 C58	299241-680		CAP:FXD DIP MICA 68PF ~+5% 300WVDC	72136	DM5-100J
A2A2 C59	299241-100		CAP:FXD DIP MICA 10PF ~+0.5PF 300WVDC	72982	8121-M058-W5R0-1P4M
A2A2 C60	299245-001		CAP:FXD CER .1UF ~+20% 50WVDC	72136	DM5-200J
A2A2 C61	299241-200		CAP:FXD DIP MICA 20PF ~+5% 300WVDC	72136	DM5-270J
A2A2 C62	299241-270		CAP:FXD DIP MICA 27PF ~+5% 300WVDC	14655	CM04FD131J03
A2A2 C63	299250-131		CAP:FXD DIP MICA 130PF ~+5% 500WVDC	72136	DM5-200J
A2A2 C64	299241-200		CAP:FXD DIP MICA 20PF ~+5% 300WVDC	14655	CM04FD131J03
A2A2 C65	299250-131		CAP:FXD DIP MICA 130PF ~+5% 500WVDC	56289	CK60AW102M
A2A2 C66	299243-001		CAP:FXD CER DISC .001UF ~+20% 1000WVDC	05397	T368B226M015AS
A2A2 C75	299240-002		CAP:FXD DIP TA 22UF ~+20% 15WVDC	05397	T368B685M035AS
A2A2 C76	299240-001		CAP:FXD DIP TA 6.8UF ~+20% 35WVDC	56289	C023F501C103Z
A2A2 C77	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	56289	C023F501C103Z
A2A2 C78	299244-001		CAP:FXD CER DISC .01UF ~+20+80% 1000WVDC	14655	CM04FD241J03
A2A2 C79	299250-241		CAP:FXD DIP MICA 240PF ~+5% 500WVDC	72136	DM5-430J
A2A2 C80	299241-430		CAP:FXD DIP MICA 43PF ~+5% 300WVDC	72314	IN4009
A2A2 CR1	299251-001		DIODE:SIGNAL	72314	IN4009
A2A2 CR2	299251-001		DIODE:SIGNAL	72314	IN4009
A2A2 CR3	299251-001		DIODE:SIGNAL	72314	IN4009
A2A2 CR4	299251-001		DIODE:SIGNAL	72314	IN4009
A2A2 CR5	299251-001		DIODE:SIGNAL	72314	IN4009
A2A2 CR6	299251-001		DIODE:SIGNAL	72314	IN4009
A2A2 CR7	299251-001		DIODE:SIGNAL	72314	IN4009
A2A2 CR8	299251-001		DIODE:SIGNAL	71279	1597-2-01
A2A2 E1	293310		TERMINAL SOLDER	99800	1025-026
A2A2 L1	299237-026		INDUCTOR:FXD MOLDED 1.8UH	99800	1025-026
A2A2 L2	299237-026		INDUCTOR:FXD MOLDED 1.8UH		

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
[illegible]	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
[illegible]	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
[illegible]	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-028		INDUCTORIFXD MOLDED 2.2UH	99800	1025-028
[illegible]	299237-028		INDUCTORIFXD MOLDED 2.2UH	99800	1025-028
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
[illegible]	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-020		INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
[illegible]	299237-026		INDUCTORIFXD MOLDED 1.8UH	99800	1025-026
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
[illegible]	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
[illegible]	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
[illegible]	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
[illegible]	299237-020		INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
[illegible]	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
[illegible]	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
[illegible]	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294151		TRANSISTORINPN SI	04713	2N4124
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294151		TRANSISTORINPN SI	04713	2N4124
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294151		TRANSISTORINPN SI	04713	2N4124
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294172		TRANSISTORINPN SI	04713	MPS918
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294153		TRANSISTORIPNP SI	04713	2N4126
[illegible]	294151		TRANSISTORINPN SI	04713	2N4124
[illegible]	294151		TRANSISTORINPN SI	04713	2N4124
[illegible]	2997C1-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
[illegible]	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
[illegible]	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
[illegible]	2997C1-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A2A2 R6	2997C1-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A2A2 R7	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R8	2997C1-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A2A2 R9	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R10	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R11	2997C1-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A2A2 R12	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R13	2997C1-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A2A2 R14	2997C1-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A2A2 R15	2997C1-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A2 R17	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R18	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R19	2997C1-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A2A2 R21	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R22	2997C1-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A2A2 R23	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R24	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R25	2997C1-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A2A2 R26	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R27	2997C1-622	11	RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A2A2 R28	2997C1-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A2A2 R29	2997C1-301		RESISTORIFXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A2A2 R30	2997C1-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A2 R32	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R33	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R34	2997C1-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A2A2 R36	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R37	2997C1-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A2A2 R38	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R39	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R40	2997C1-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A2A2 R41	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R42	2997C1-622		RESISTORIFXD CAP 6.2K +-5% 1/4	01121	RC07GF622J
A2A2 R43	2997C1-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A2A2 R44	2997C1-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A2A2 R45	2997C1-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A2A2 R47	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R48	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R49	2997C1-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A2A2 R50	2997C1-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A2A2 R51	2997C1-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A2A2 R52	2997C1-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A2A2 R53	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R54	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R55	2997C1-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A2A2 R56	2997C1-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A2A2 R57	2997C1-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A2A2 R58	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A2A2 R59	299701-681		RESISTORIFXD CAR 680 OHM ~+5% 1/4W	01121	RC07GF681J
A2A2 R60	299701-681		RESISTORIFXD CAR 680 OHM ~+5% 1/4W	01121	RC07GF681J
A2A2 R61	299701-471		RESISTORIFXD CAR 470 OHM ~+5% 1/4W	01121	RC07GF471J
A2A2 R70	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A2A2 R71	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A2A2 R72	299701-470		RESISTORIFXD CAR 47 OHM ~+5% 1/4W	01121	RC07GF470J
A2A2 TP1	293159		TEST POINT	00779	2-582118-0
A2A2 U1	293355		ICILIN MIXER	01295	SN76514N
A2A2 U2	293350		ICITTL DUAL J-K FF	01295	SN74S113N
A2A2 U3	293355		ICILIN MIXER	01295	SN76514N
A2A2 U4	293350		ICITTL DUAL J-K FF	01295	SN74S113N
A2A2 U5	293355		ICILIN MIXER	01295	SN76514N
A2A2 U6	293350		ICITTL DUAL J-K FF	01295	SN74S113N
A2A2 U7	293355		ICILIN MIXER	01295	SN76514N
A2A2 U8	293496		ICITTL DECADE COUNTER	18324	82S90
A2A2	296586		SOCKETIC 14 PIN	01295	C931410
A2A3	299219		SAME AS A2A2		
A2A4	299219		SAME AS A2A2		
A2A5	299285		PWB ASSY, LOWER ORDER BCD JUMPER BD	00752	299285
A2A6	299203		PWB ASSY, BCD FIXED TUNED INTERCONNECTING	00752	299203
A2A6 C1	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A6 C2	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A6 C3	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A6 C4	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A6 C5	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A6 C6	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A6 C7	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A6 C8	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A2A6 J1	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A2A6 J2	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A2A6 J3	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A2A6 J4	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A2A6 J6	294406	5	CONNECTOR122 PIN DUAL EDGE	91662	00-6007-044-451-018
A2A6 J7	294406		CONNECTOR122 PIN DUAL EDGE	91662	00-6007-044-451-018
A2A6 J8	294406		CONNECTOR122 PIN DUAL EDGE	91662	00-6007-044-451-018
A2A6 J9	294406		CONNECTOR122 PIN DUAL EDGE	91662	00-6007-044-451-018
A2A6 J10	294406		CONNECTOR122 PIN DUAL EDGE	91662	00-6007-044-451-018
A2A6 J11	299232		HEADERIDOUBLE ROW STRAIGHT POST 26 POS	00779	1-87227-3
A2A7	299220		PWB ASSY, BCD DISTRIBUTION BD	00752	299220
A2A7	299233		HEADERIRT ANGLE 26 PIN	00779	1-87230-5
A2A8	299220		SAME AS A2A7		
A4	298934		ASSY, HIGHER ORDER BCD	00752	298934
A4 FL1	293609	15	FILTER CONNECTOR	72982	1201-082
A4 FL2	293609		FILTER CONNECTOR	72982	1201-082
A4 FL3	293609		FILTER CONNECTOR	72982	1201-082
A4 FL4	293609		FILTER CONNECTOR	72982	1201-082
A4 FL5	293609		FILTER CONNECTOR	72982	1201-082
A4 FL6	293609		FILTER CONNECTOR	72982	1201-082
A4 FL7	293609		FILTER CONNECTOR	72982	1201-082
A4 FL8	293609		FILTER CONNECTOR	72982	1201-082
A4 FL9	293609		FILTER CONNECTOR	72982	1201-082
A4 FL10	293609		FILTER CONNECTOR	72982	1201-082
A4 FL11	293609		FILTER CONNECTOR	72982	1201-082
A4 FL12	293609		FILTER CONNECTOR	72982	1201-082
A4A1	298904		PWB ASSY, BCD 1	00752	298904
A4A1 C1	299241-430		CAPIFXD DIP MICA 43PF ~+5% 300WVDC	72136	DM5-430J
A4A1 C2	299241-430		CAPIFXD DIP MICA 43PF ~+5% 300WVDC	72136	DM5-430J
A4A1 C3	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A1 C4	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A4A1 C5	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A1 C6	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A4A1 C7	299245-002	57	CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A1 C8	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A1 C9	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A1 C10	299250-391	7	CAPIFXD DIP MICA 390PF ~+5% 100WVDC	14655	CM04FA391J03
A4A1 C11	299250-181	9	CAPIFXD DIP MICA 180PF ~+5% 500WVDC	14655	CM04FD181J03
A4A1 C12	299250-131		CAPIFXD DIP MICA 130PF ~+5% 500WVDC	14655	CM04FD131J03
A4A1 C13	299250-131		CAPIFXD DIP MICA 130PF ~+5% 500WVDC	14655	CM04FD131J03
A4A1 C14	299250-181		CAPIFXD DIP MICA 180PF ~+5% 500WVDC	14655	CM04FD181J03
A4A1 C15	299250-391		CAPIFXD DIP MICA 390PF ~+5% 100WVDC	14655	CM04FA391J03
A4A1 C16	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A1 C17	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A1 C18	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A1 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A4A1 E2	293306	52	TERMINALIDISCONNECT	71279	1019-2-901
A4A1 E3	293306		TERMINALIDISCONNECT	71279	1019-2-901
A4A1 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A4A1 E5	293310		TERMINAL SOLDER	71279	1597-2-01
A4A1 E6	293310		TERMINAL SOLDER	71279	1597-2-01
A4A1 J1	299235-001	30	CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A4A1 L1	299237-006	2	INDUCTORIFXD MOLDED .33UH	99800	1025-06
A4A1 L2	231105-003	10	INDUCTORIVAR .44UH	00752	231105-003
A4A1 L3	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A1 L4	231105-003		INDUCTORIVAR .44UH	00752	231105-003
A4A1 L5	299237-048	12	INDUCTORIFXD MOLDED 15UH	99800	1025-048
A4A1 L6	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A1 L7	231105-004	14	INDUCTORIVAR .9UH	00752	231105-004
A4A1 L8	299237-036		INDUCTORIFXD MOLDED 5.6UH	99800	1025-036
A4A1 L9	231105-004		INDUCTORIVAR .9UH	00752	231105-004
A4A1 L10	299237-044	1	INDUCTORIFXD MOLDED 10.0UH	99800	1025-044
A4A1 L11	231105-004		INDUCTORIVAR .9UH	00752	231105-004
A4A1 L12	299237-036		INDUCTORIFXD MOLDED 5.6UH	99800	1025-036
A4A1 L13	231105-004		INDUCTORIVAR .9UH	00752	231105-004
A4A1 L14	299237-048		INDUCTORIFXD MOLDED 15UH	99800	1025-048
A4A1 R1	231104-001	8	MIXER	15542	SRA-1
A4A1 U1	293350		ICITTL DUAL J-K FF	01295	SN74S113N
A4A1	293994		TRANSIPAD	07047	10105-DAP
A4A2	298905		PWB ASSY, BCD 2	00752	298905
A4A2 C1	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A2 C2	299250-301	9	CAPIFXD DIP MICA 300PF ~+5% 300WVDC	14655	CM04FC301J03
A4A2 C3	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A2 C4	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A2 C5	299241-101		CAPIFXD DIP MICA 100PF ±5% 300WVDC	72136	DM5-101J
A4A2 C6	299241-101		CAPIFXD DIP MICA 100PF ±5% 300WVDC	72136	DM5-101J
A4A2 C7	299250-241		CAPIFXD DIP MICA 240PF ±5% 500WVDC	14655	CM04FD241J03
A4A2 C8	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A2 C9	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A2 C11	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A2 C12	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A2 C13	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A2 C14	299250-151		CAPIFXD DIP MICA 150PF ±5% 500WVDC	14655	CM04FD151J03
A4A2 C15	299250-301		CAPIFXD DIP MICA 300PF ±5% 300WVDC	14655	CM04FC301J03
A4A2 C16	299241-101		CAPIFXD DIP MICA 100PF ±5% 300WVDC	72136	DM5-101J
A4A2 C17	299241-101		CAPIFXD DIP MICA 100PF ±5% 300WVDC	72136	DM5-101J
A4A2 C18	299250-151		CAPIFXD DIP MICA 150PF ±5% 500WVDC	14655	CM04FD151J03
A4A2 C19	299250-301		CAPIFXD DIP MICA 300PF ±5% 300WVDC	14655	CM04FC301J03
A4A2 E1	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A2 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A4A2 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A4A2 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A4A2 E5	293310		TERMINAL SOLDER	71279	1597-2-01
A4A2 E6	293310		TERMINAL SOLDER	71279	1597-2-01
A4A2 E7	293310		TERMINAL SOLDER	71279	1597-2-01
A4A2 E8	293310		TERMINAL SOLDER	71279	1597-2-01
A4A2 L1	299237-016	2	INDUCTORIFXD MOLDED .68UH	99800	1025-016
A4A2 L2	299237-016		INDUCTORIFXD MOLDED .68UH	99800	1025-016
A4A2 L3	231105-001	42	INDUCTORIVAR .133UH	00752	231105-001
A4A2 L4	299237-024		INDUCTORIFXD MOLDED 1.8UH	99800	1025-024
A4A2 L5	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A4A2 L6	299237-020		INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
A4A2 L7	299237-042	9	INDUCTORIFXD MOLDED 8.2UH	99800	1025-042
A4A2 L8	231105-003		INDUCTORIVAR .44UH	00752	231105-003
A4A2 L9	299237-036		INDUCTORIFXD MOLDED 5.6UH	99800	1025-036
A4A2 L10	231105-003		INDUCTORIVAR .44UH	00752	231105-003
A4A2 L11	299237-042		INDUCTORIFXD MOLDED 8.2UH	99800	1025-042
A4A2 L12	231105-003		INDUCTORIVAR .44UH	00752	231105-003
A4A2 L13	299237-036		INDUCTORIFXD MOLDED 5.6UH	99800	1025-036
A4A2 L14	231105-003		INDUCTORIVAR .44UH	00752	231105-003
A4A2 L15	299237-042		INDUCTORIFXD MOLDED 8.2UH	99800	1025-042
A4A2 M1	231104-001		MIXER	15542	SRA-1
A4A2 Q1	294172		TRANSISTORINPN SI	04713	MPS918
A4A2 R1	299701-161	18	RESISTORIFXD CAR 160 OHM ±5% 1/4W	01121	RC07GF161J
A4A2 R2	299701-470		RESISTORIFXD CAR 47 OHM ±5% 1/4W	01121	RC07GF470J
A4A2 R3	299701-161		RESISTORIFXD CAR 160 OHM ±5% 1/4W	01121	RC07GF161J
A4A2 R4	299701-301		RESISTORIFXD CAR 300 OHM ±5% 1/4W	01121	RC07GF301J
A4A2 R5	299701-180	6	RESISTORIFXD CAR 18 OHM ±5% 1/4W	01121	RC07GF180J
A4A2 R6	299701-301		RESISTORIFXD CAR 300 OHM ±5% 1/4W	01121	RC07GF301J
A4A2 R7	299701-362		RESISTORIFXD CAR 3.6K ±5% 1/4W	01121	RC07GF362J
A4A2 R8	299701-242		RESISTORIFXD CAR 2.4K ±5% 1/4W	01121	RC07GF242J
A4A2 R9	299701-391		RESISTORIFXD CAR 390 OHM ±5% 1/4W	01121	RC07GF391J
A4A2 R10	299701-391		RESISTORIFXD CAR 390 OHM ±5% 1/4W	01121	RC07GF391J
A4A2 R11	299701-471		RESISTORIFXD CAR 470 OHM ±5% 1/4W	01121	RC07GF471J
A4A2 R12	299701-101		RESISTORIFXD CAR 100 OHM ±5% 1/4W	01121	RC07GF101J
A4A2 U1	293350		ICITTL DUAL J-K FF	01295	SN7451BN
A4A2	294550		SOCKETIPIN	00779	1-331677-8
A4A2	294566		SOCKETIIC 14 PIN	01295	C951410
A4A2	293494		TRANSIPAD	07047	10105-DAP
A4A3	298906		PWB ASSY, BCD 4	00782	298906
A4A3 C1	299241-680		CAPIFXD DIP MICA 68PF ±5% 300WVDC	72136	DM5-680J
A4A3 C2	299250-241		CAPIFXD DIP MICA 240PF ±5% 500WVDC	14655	CM04FD241J03
A4A3 C3	299241-680		CAPIFXD DIP MICA 68PF ±5% 300WVDC	72136	DM5-680J
A4A3 C4	299250-161		CAPIFXD DIP MICA 160PF ±5% 500WVDC	14655	CM04FD161J03
A4A3 C5	299241-101		CAPIFXD DIP MICA 100PF ±5% 300WVDC	72136	DM5-101J
A4A3 C6	299241-750		CAPIFXD DIP MICA 75PF ±5% 300WVDC	72136	DM5-750J
A4A3 C7	299241-101		CAPIFXD DIP MICA 100PF ±5% 300WVDC	72136	DM5-101J
A4A3 C8	299250-181		CAPIFXD DIP MICA 180PF ±5% 500WVDC	14655	CM04FD181J03
A4A3 C9	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A3 C10	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A3 C11	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A3 C12	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72962	8121-M058-651-103M
A4A3 C13	299241-100		CAPIFXD DIP MICA 10PF ±0.5PF 300WVDC	72136	DM5-100J
A4A3 C14	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72962	8121-M058-651-103M
A4A3 C15	299245-002		CAPIFXD CER .01UF ±20% 50WVDC	72982	8121-M058-651-103M
A4A3 C16	299250-301		CAPIFXD DIP MICA 300PF ±5% 300WVDC	14655	CM04FC301J03
A4A3 C17	299250-391		CAPIFXD DIP MICA 390PF ±5% 100WVDC	14655	CM04FA391J03
A4A3 C18	299250-181		CAPIFXD DIP MICA 180PF ±5% 500WVDC	14655	CM04FD181J03
A4A3 C19	299250-161		CAPIFXD DIP MICA 160PF ±5% 500WVDC	14655	CM04FD161J03
A4A3 C20	299250-301		CAPIFXD DIP MICA 300PF ±5% 300WVDC	14655	CM04FC301J03
A4A3 C21	299250-391		CAPIFXD DIP MICA 390PF ±5% 100WVDC	14655	CM04FA391J03
A4A3 E1	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A3 E2	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A3 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A4A3 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A4A3 E5	293310		TERMINAL SOLDER	71279	1597-2-01
A4A3 E6	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A3 E7	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A3 E8	293310		TERMINAL SOLDER	71279	1597-2-01
A4A3 L1	299237-012	8	INDUCTORIFXD MOLDED .47UH	99800	1025-012
A4A3 L2	299237-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A4A3 L3	231105-002	9	INDUCTORIVAR .27UH	00752	231105-002
A4A3 L4	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A3 L5	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A3 L6	231105-002		INDUCTORIVAR .27UH	00752	231105-002
A4A3 L7	231105-002		INDUCTORIVAR .27UH	00752	231105-002
A4A3 L8	299237-046		INDUCTORIFXD MOLDED 15UH	99800	1025-046
A4A3 L9	299237-020		INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
A4A3 L10	299237-048		INDUCTORIFXD MOLDED 18UH	99800	1025-048
A4A3 L11	231105-003		INDUCTORIVAR .44UH	00752	231105-003
A4A3 L12	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A3 L13	231105-003		INDUCTORIVAR .44UH	00752	231105-003
A4A3 L14	299237-036		INDUCTORIFXD MOLDED 5.6UH	99800	1025-036
A4A3 L15	231105-003		INDUCTORIVAR .44UH	00752	231105-003
A4A3 L16	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A3 L17	231105-004		INDUCTORIVAR .44UH	00752	231105-004
A4A3 M1	231104-001		MIXER	15542	SRA-1
A4A3 Q1	294172		TRANSISTORINPN SI	04713	MPS918
A4A3 R1	299701-101		RESISTORIFXD CAR 100 OHM ±5% 1/4W	01121	RC07GF101J
A4A3 R2	299701-470		RESISTORIFXD CAR 47 OHM ±5% 1/4W	01121	RC07GF470J
A4A3 R3	299701-101		RESISTORIFXD CAR 100 OHM ±5% 1/4W	01121	RC07GF101J
A4A3 R4	299701-301		RESISTORIFXD CAR 300 OHM ±5% 1/4W	01121	RC07GF301J
A4A3 R5	299701-180		RESISTORIFXD CAR 18 OHM ±5% 1/4W	01121	RC07GF180J
A4A3 R6	299701-301		RESISTORIFXD CAR 300 OHM ±5% 1/4W	01121	RC07GF301J
A4A3 R7	299701-362		RESISTORIFXD CAR 3.6K ±5% 1/4W	01121	RC07GF362J

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A3 R8	299701-242		RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	RC07GF242J
A4A3 R9	299701-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	RC07GF391J
A4A3 R10	299701-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	RC07GF391J
A4A3 R11	299701-471		RESISTORIFXD CAR 470 OHM ~+5% 1/4W	01121	RC07GF471J
A4A3 R12	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A3 U1	293350		ICITTL DUAL J-K FF	01295	SN74S113N
A4A3	293994		TRANSIPAD	07047	10105-DAP
A4A4	298907		PWB ASSY, BCD 8 #1	00752	298907
A4A4 C1	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A4 C2	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A4 C3	299241-680		CAPIFXD DIP MICA 68PF ~+5% 300WVDC	72136	DM5-680J
A4A4 C4	299250-181		CAPIFXD DIP MICA 180PF ~+5% 500WVDC	14655	CM04FD181J03
A4A4 C5	299241-470	2	CAPIFXL DIP MICA 47PF ~+5% 300WVDC	72136	DM5-470J
A4A4 C6	299241-470		CAPIFXD DIP MICA 47PF ~+5% 300WVDC	72136	DM5-470J
A4A4 C7	299241-680		CAPIFXD DIP MICA 68PF ~+5% 300WVDC	72136	DM5-680J
A4A4 C8	299250-181		CAPIFXD DIP MICA 180PF ~+5% 500WVDC	14655	CM04FD181J03
A4A4 C9	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A4 C10	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A4 C11	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A4 C12	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A4 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A4A4 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A4A4 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A4A4 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A4A4 E5	293310		TERMINAL SOLDER	71279	1597-2-01
A4A4 E6	293310		TERMINAL SOLDER	71279	1597-2-01
A4A4 E7	293310		TERMINAL SOLDER	71279	1597-2-01
A4A4 L1	299237-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A4A4 L2	2311C5-002		INDUCTORIVAR .27UH	00752	231105-002
A4A4 L3	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A4 L4	231105-002		INDUCTORIVAR .27UH	00752	231105-002
A4A4 L5	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A4 L6	231105-002		INDUCTORIVAR .27UH	00752	231105-002
A4A4 L7	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A4 L8	231105-002		INDUCTORIVAR .27UH	00752	231105-002
A4A4 L9	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A4 M1	231104-001		MIXER	15542	SRA-1
A4A4 Q1	294172		TRANSISTORINPN SI	04713	MPS918
A4A4 R1	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A4 R2	299701-680	6	RESISTORIFXD CAR 68 OHM ~+5% 1/4W	01121	RC07GF680J
A4A4 R3	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A4 R4	299701-301		RESISTORIFXD CAR 300 OHM ~+5% 1/4W	01121	RC07GF301J
A4A4 R5	299701-180		RESISTORIFXD CAP 18 OHM ~+5% 1/4W	01121	RC07GF180J
A4A4 R6	299701-301		RESISTORIFXD CAR 300 OHM ~+5% 1/4W	01121	RC07GF301J
A4A4 R7	299701-362		RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	RC07GF362J
A4A4 R8	299701-242		RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	RC07GF242J
A4A4 R9	299701-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	RC07GF391J
A4A4 R10	299701-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	RC07GF391J
A4A4	294550		SOCKETIPIN	00779	1-331677-8
A4A4	293994		TRANSIPAD	07047	10105-DAP
A4A5	298908		PWB ASSY, BCD 8 #2	00752	298908
A4A5 C1	299250-181		CAPIFXD DIP MICA 180PF ~+5% 500WVDC	14655	CM04FD181J03
A4A5 C2	299241-680		CAPIFXD DIP MICA 68PF ~+5% 300WVDC	72136	DM5-680J
A4A5 C3	299241-680		CAPIFXD DIP MICA 68PF ~+5% 300WVDC	72136	DM5-680J
A4A5 C5	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C6	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C7	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C8	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C9	299245-001		CAPIFXD CER .1UF ~+20% 50WVDC	72982	8121-M058-W5R0-104M
A4A5 C10	299245-001		CAPIFXD CER .1UF ~+20% 50WVDC	72982	8121-M058-W5R0-104M
A4A5 C11	299240-002		CAPIFXD DIP TA 22UF ~+20% 15WVDC	05397	T368B226M015AS
A4A5 C12	299245-001		CAPIFXD CER .1UF ~+20% 50WVDC	72982	8121-M058-W5R0-104M
A4A5 C13	299250-471	5	CAPIFXD DIP MICA 470PF ~+5% 500WVDC	14655	CM06FD471J03
A4A5 C14	299250-132	2	CAPIFXD DIP MICA 1300PF ~+5% 500WVDC	14655	CM06FD132J03
A4A5 C15	299250-331	1	CAPIFXD DIP MICA 330PF ~+5% 100WVDC	14655	CM04FA331J03
A4A5 C16	299241-070	13	CAPIFXD DIP MICA 7PF ~+0.5PF 300WVDC	72136	DM5-070D
A4A5 C17	299241-070		CAPIFXD DIP MICA 7PF ~+0.5PF 300WVDC	72136	DM5-070D
A4A5 C18	299241-070		CAPIFXD DIP MICA 7PF ~+0.5PF 300WVDC	72136	DM5-070D
A4A5 C19	299241-070		CAPIFXD DIP MICA 7PF ~+0.5PF 300WVDC	72136	DM5-070D
A4A5 C20	299250-471		CAPIFXD DIP MICA 470PF ~+5% 500WVDC	14655	CM06FD471J03
A4A5 C21	299250-132		CAPIFXD DIP MICA 1300PF ~+5% 500WVDC	14655	CM06FD132J03
A4A5 C22	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C23	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C24	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A4A5 C25	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C26	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C27	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A4A5 C28	299250-391		CAPIFXD DIP MICA 390PF ~+5% 100WVDC	14655	CM04FA391J03
A4A5 C29	299250-151		CAPIFXD DIP MICA 150PF ~+5% 500WVDC	14655	CM04FD151J03
A4A5 C30	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A4A5 C31	299250-391		CAPIFXD DIP MICA 390PF ~+5% 100WVDC	14655	CM04FA391J03
A4A5 C32	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C33	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C34	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 C35	299241-430		CAPIFXD DIP MICA 43PF ~+5% 300WVDC	72136	DM5-430J
A4A5 C36	299241-430		CAPIFXD DIP MICA 43PF ~+5% 300WVDC	72136	DM5-430J
A4A5 C37	299240-001		CAPIFXD DIP TA 6.8UF ~+20% 35WVDC	05397	T368B685M035AS
A4A5 C38	299245-001		CAPIFXD CER .1UF ~+20% 50WVDC	72982	8121-M058-W5R0-104M
A4A5 C39	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A5 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A4A5 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A4A5 J1	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A4A5 L1	231105-002		INDUCTORIVAR .27UH	00752	231105-002
A4A5 L2	231105-002		INDUCTORIVAR .27UH	00752	231105-002
A4A5 L3	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A5 L4	299237-048		INDUCTORIFXD MOLDED 15UH	99800	1025-048
A4A5 L5	299237-048		INDUCTORIFXD MOLDED 15UH	99800	1025-048
A4A5 L6	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A5 L7	231105-004		INDUCTORIVAR .9UH	00752	231105-004
A4A5 L8	299237-056	6	INDUCTORIFXD MOLDED 33UH	99800	1025-056
A4A5 L9	231105-004		INDUCTORIVAR .9UH	00752	231105-004
A4A5 L10	231105-004		INDUCTORIVAR .9UH	00752	231105-004
A4A5 L11	231105-004		INDUCTORIVAR .9UH	00752	231105-004
A4A5 L12	299237-056		INDUCTORIFXD MOLDED 33UH	99800	1025-056
A4A5 L13	231105-004		INDUCTORIVAR .9UH	00752	231105-004
A4A5 L14	299237-048		INDUCTORIFXD MOLDED 15UH	99800	1025-048
A4A5 L15	2311C5-001		INDUCTORIVAR .133UH	00752	231105-001
A4A5 L16	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A5 L17	299237-032		INDUCTORIFXD MOLDED 3.3UH	99800	1025-032
A4A5 L18	2311C5-001		INDUCTORIVAR .133UH	00752	231105-001

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A5 L19	299237-008		INDUCTORIFXD MOLDED .88UH	99800	1025-0A
A4A5 L20	299237-048		INDUCTORIFXD MOLDED 18UH	99800	1025-048
A4A5 L21	299237-048		INDUCTORIFXD MOLDED 18UH	99800	1025-04A
A4A5 L22	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A5 L23	299237-048		INDUCTORIFXD MOLDED 18UH	99800	1025-048
A4A5 L24	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A5 L25	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A4A5 L26	299237-048		INDUCTORIFXD MOLDED 18UH	99800	1025-048
A4A5 Q1	298172		TRANSISTORINPN SI	04713	MPS918
A4A5 Q2	294186	1	TRANSISTORIPNP SI	04713	2N4403
A4A5 Q3	299239-001	20	TRANSISTORINPN SI	04713	2N5179
A4A5 Q4	299239-001		TRANSISTORINPN SI	04713	2N5179
A4A5 Q5	298172		TRANSISTORINPN SI	04713	MPS918
A4A5 R1	299701-362		RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	RC07GF362J
A4A5 R2	299701-242		RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	RC07GF242J
A4A5 R3	299701-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	RC07GF391J
A4A5 R4	299701-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	RC07GF391J
A4A5 R5	299701-681		RESISTORIFXD CAR 680 OHM ~+5% 1/4W	01121	RC07GF681J
A4A5 R6	299701-102		RESISTORIFXD CAR 1K ~+5% 1/4W	01121	RC07GF102J
A4A5 R7	299701-101		RESISTORIFXD CAP 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A5 R8	299701-301		RESISTORIFXD CAR 300 OHM ~+5% 1/4W	01121	RC07GF301J
A4A5 R9	299701-362		RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	RC07GF362J
A4A5 R10	299701-242		RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	RC07GF242J
A4A5 R11	299701-471		RESISTORIFXD CAR 470 OHM ~+5% 1/4W	01121	RC07GF471J
A4A5 R12	299701-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	RC07GF391J
A4A5 R13	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A4A5 R14	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A4A5 R15	299701-102		RESISTORIFXD CAR 1K ~+5% 1/4W	01121	RC07GF102J
A4A5 R16	299701-201	4	RESISTORIFXD CAR 200 OHM ~+5% 1/4W	01121	RC07GF201J
A4A5 R17	299701-362		RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	RC07GF362J
A4A5 R18	299701-242		RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	RC07GF242J
A4A5 R19	299701-391		RESISTORIFXD CAR 390 OHM ~+5% 1/4W	01121	RC07GF391J
A4A5 R20	299701-680		RESISTORIFXD CAR 68 OHM ~+5% 1/4W	01121	RC07GF680J
A4A5 R21	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A5 R22	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A5 R23	299701-680		RESISTORIFXD CAR 68 OHM ~+5% 1/4W	01121	RC07GF680J
A4A5 U1	293496		ICITTL DECADE COUNTER	18324	82S90
	294566		SOCKETTIC 14 PIN	01295	C931410
A4A6	298909		PWR ASSY, BUFFER AMP	00752	298909
A4A6 C1	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A4A6 C2	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A4A6 C3	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A6 C4	299241-820	2	CAPIFXD DIP MICA 82PF ~+5% 300WVDC	72136	DM5-820J
A4A6 C5	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A6 C6	299241-560	10	CAPIFXD DIP MICA 56PF ~+5% 300WVDC	72136	DM5-560J
A4A6 C7	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A4A6 C8	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A6 C9	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A6 C10	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A6 C11	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A4A6 C12	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A4A6 C13	299241-820		CAPIFXD DIP MICA 82PF ~+5% 300WVDC	72136	DM5-820J
A4A6 C14	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A6 C15	299241-560		CAPIFXD DIP MICA 56PF ~+5% 300WVDC	72136	DM5-560J
A4A6 C16	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A4A6 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A4A6 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A4A6 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A4A6 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A4A6 E5	293316		TERMINALIDISCONNECT	71279	1019-2-901
A4A6 J2	299235-001		CONNECTORIST ANGLE PC BD	98291	51-353-M000
A4A6 J3	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A4A6 J4	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A4A6 J5	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A4A6 L1	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A6 L2	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A6 L3	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A4A6 L4	299237-034	2	INDUCTORIFXD MOLDED 3.9UH	99800	1025-034
A4A6 L5	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A4A6 L6	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A6 L7	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A6 L8	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A4A6 L9	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A4A6 L10	299237-034		INDUCTORIFXD MOLDED 3.9UH	99800	1025-034
A4A6 L11	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A4A6 Q1	299239-001		TRANSISTORINPN SI	04713	2N5179
A4A6 Q2	299239-001		TRANSISTORINPN SI	04713	2N5179
A4A6 R1	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A6 R3	299701-362		RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	RC07GF362J
A4A6 R4	299701-242		RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	RC07GF242J
A4A6 R5	299701-102		RESISTORIFXD CAR 1K ~+5% 1/4W	01121	RC07GF102J
A4A6 R6	299701-471		RESISTORIFXD CAR 470 OHM ~+5% 1/4W	01121	RC07GF471J
A4A6 R7	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A6 R8	299701-6A0		RESISTORIFXD CAR 68 OHM ~+5% 1/4W	01121	RC07GF680J
A4A6 R9	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A6 R10	299701-242		RESISTORIFXD CAR 2.4K ~+5% 1/4W	01121	RC07GF242J
A4A6 R11	299701-471		RESISTORIFXD CAR 470 OHM ~+5% 1/4W	01121	RC07GF471J
A4A6 R12	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A6 R14	299701-362		RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	RC07GF362J
A4A6 R15	299701-102		RESISTORIFXD CAR 1K ~+5% 1/4W	01121	RC07GF102J
A4A6 R16	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A6 R17	299701-680		RESISTORIFXD CAR 68 OHM ~+5% 1/4W	01121	RC07GF680J
A4A6 R18	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A4A7	298910		PWR ASSY, 64/65 SWITCH	00752	298910
A4A7 C1	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A7 C2	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A7 C4	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A4A7 C5	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A7 C7	299271-391	4	CAPIFXD CER 390PF ~+10% 200WVDC	56289	CK05BX391K
A4A7 C8	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A7 C9	299245-002		CAPIFXD CER .01UF ~+20% 50WVDC	72982	8121-M058-651-103M
A4A7 C10	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A4A7 C11	299241-101		CAPIFXD DIP MICA 100PF ~+5% 300WVDC	72136	DM5-101J
A4A7 C12	299241-750		CAPIFXD DIP MICA 75PF ~+5% 300WVDC	72136	DM5-750J
A4A7 C13	299241-560		CAPIFXD DIP MICA 56PF ~+5% 300WVDC	72136	DM5-560J
A4A7 C14	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A4A7 CR1	299251-001	32	DIODEISIGNAL	72314	IN4009
A4A7 CR2	299251-001		DIODEISIGNAL	72314	IN4009
A4A7 E1	293306		TERMINALIDISCONNECT	71279	1019-2-901
A4A7 E2	293306		TERMINALIDISCONNECT	71279	1019-2-901

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A7 E3	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A7 E4	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A7 E5	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A7 E6	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A7 E7	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A7 E8	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A7 E9	293306		TERMINAL:DISCONNECT	71279	1019-2-901
A4A7 L1	299237-038		INDUCTOR:FXD MOLDED 5.6UH	99800	1025-038
A4A7 L2	299237-038		INDUCTOR:FXD MOLDED 5.6UH	99800	1025-038
A4A7 L3	299267-038		INDUCTOR:FXD MOLDED 5.6UH	99800	1025-038
A4A7 L4	299237-038		INDUCTOR:FXD MOLDED 5.6UH	99800	1025-038
A4A7 L5	231105-001		INDUCTOR:VAR .133UH	00752	231105-001
A4A7 L6	299237-032		INDUCTOR:FXD MOLDED 3.3UH	99800	1025-032
A4A7 L7	231105-001		INDUCTOR:VAR .133UH	00752	231105-001
A4A7 Q1	294172		TRANSISTOR:NPN SI	04713	MPS918
A4A7 Q2	294172		TRANSISTOR:NPN SI	04713	MPS918
A4A7 Q3	294172		TRANSISTOR:NPN SI	04713	MPS918
A4A7 Q4	294172		TRANSISTOR:NPN SI	04713	MPS918
A4A7 Q5	294172		TRANSISTOR:NPN SI	04713	MPS918
A4A7 Q7	294153		TRANSISTOR:PNP SI	04713	2N4126
A4A7 Q8	294153		TRANSISTOR:PNP SI	04713	2N4126
A4A7 Q9	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A4A7 R1	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A7 R2	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A7 R3	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A7 R4	299701-681		RESISTOR:FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A4A7 R5	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A7 R6	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A7 R7	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A7 R8	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A7 R9	299701-152		RESISTOR:FXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A7 R10	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A4A7 R13	299701-103		RESISTOR:FXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A4A7 R14	299701-152		RESISTOR:FXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A7 R15	299701-242		RESISTOR:FXD CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A4A7 R16	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A4A7 R17	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A7 R18	299701-681		RESISTOR:FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A4A8	298910		SAME AS A4A7		
A4A9	298910		SAME AS A4A7		
A4A10	298910		SAME AS A4A7		
A4A11	299248		PWB ASSY, BCD FIXED TUNED 10 KHZ	00752	[illegible]
A4A11 C1	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C2	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C3	299241-060		CAP:FXD DIP MICA 6PF +-0.5PF 300WVDC	72136	DM5-060D
A4A11 C4	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A4A11 C5	299241-101		CAP:FXD DIP MICA 100PF +-5% 300WVDC	72136	DM5-101J
A4A11 C6	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A4A11 C7	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A4A11 C8	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A4A11 C9	299250-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A4A11 C10	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A4A11 C11	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C12	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A4A11 C13	299241-060		CAP:FXD DIP MICA 6PF +-0.5PF 300WVDC	72136	DM5-060D
A4A11 C14	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C15	299241-680		CAP:FXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A4A11 C16	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A4A11 C17	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A4A11 C18	299241-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A4A11 C19	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A4A11 C20	299250-131		CAP:FXD DIP MICA 130PF +-5% 500WVDC	14655	CM04FD131J03
A4A11 C21	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A4A11 C22	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C23	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C24	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C25	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C26	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C27	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C28	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C29	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C30	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C31	299241-060		CAP:FXD DIP MICA 6PF +-0.5PF 300WVDC	72136	DM5-060D
A4A11 C32	299241-120		CAP:FXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A4A11 C33	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C34	299241-750		CAP:FXD DIP MICA 75PF +-5% 300WVDC	72136	DM5-750J
A4A11 C35	299241-120		CAP:FXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A4A11 C36	299245-001		CAP:FXD CER .1UF +-20% 50WVDC	72982	8121-M050-W5R0-104M
A4A11 C37	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A4A11 C38	299250-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A4A11 C39	299250-151		CAP:FXD DIP MICA 150PF +-5% 500WVDC	14655	CM04FD151J03
A4A11 C40	299250-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A4A11 C41	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A4A11 C42	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C43	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A4A11 C44	299241-060		CAP:FXD DIP MICA 6PF +-0.5PF 300WVDC	72136	DM5-060D
A4A11 C45	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C46	299241-680		CAP:FXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A4A11 C47	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A4A11 C48	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A4A11 C49	299241-680		CAP:FXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A4A11 C50	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A4A11 C51	299245-001		CAP:FXD CER .1UF +-20% 50WVDC	72982	8121-M050-W5R0-104M
A4A11 C52	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A4A11 C53	299241-270		CAP:FXD DIP MICA 27PF +-5% 300WVDC	72136	DM5-270J
A4A11 C54	299250-131		CAP:FXD DIP MICA 130PF +-5% 500WVDC	14655	CM04FD131J03
A4A11 C55	299241-200		CAP:FXD DIP MICA 20PF +-5% 300WVDC	72136	DM5-200J
A4A11 C56	299250-131		CAP:FXD DIP MICA 130PF +-5% 500WVDC	14655	CM04FD131J03
A4A11 C56	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C57	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C58	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C59	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C60	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C61	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C62	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C63	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C64	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A4A11 C65	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A11 C66	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C67	299241-070		CAPIFXD DIP MICA 7PF -+0.5PF 300WVDC	72136	DM5-070D
A4A11 C68	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C69	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C70	299241-070		CAPIFXD DIP MICA 7PF -+0.5PF 300WVDC	72136	DM5-070D
A4A11 C71	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C72	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C73	299241-430		CAPIFXD DIP MICA 43PF -+5% 300WVDC	72136	DM5-430J
A4A11 C74	299241-430		CAPIFXD DIP MICA 43PF -+5% 300WVDC	72136	DM5-430J
A4A11 C75	299241-070		CAPIFXD DIP MICA 7PF -+0.5PF 300WVDC	72136	DM5-070D
A4A11 C76	299240-002		CAPIFXD DIP TA 22UF -+20% 15WVDC	05397	T368B226M015AS
A4A11 C77	299240-001		CAPIFXD DIP TA 6.8UF -+20% 35WVDC	05397	T368B685M035AS
A4A11 C78	299241-070		CAPIFXD DIP MICA 7PF -+0.5PF 300WVDC	72136	DM5-070D
A4A11 C80	299241-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A4A11 C81	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C82	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C83	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C84	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 C85	299243-001		CAPIFXD CER DISC .001UF -+20% 1000WVDC	56289	CK60AW102M
A4A11 CR1	299251-001		DIODE!SIGNAL	72814	IN4009
A4A11 CR2	299251-001		DIODE!SIGNAL	72814	IN4009
A4A11 CR3	299251-001		DIODE!SIGNAL	72814	IN4009
A4A11 CR4	299251-001		DIODE!SIGNAL	72814	IN4009
A4A11 CR5	299251-001		DIODE!SIGNAL	72814	IN4009
A4A11 CR6	299251-001		DIODE!SIGNAL	72814	IN4009
A4A11 CR7	299251-001		DIODE!SIGNAL	72814	IN4009
A4A11 CR8	299251-001		DIODE!SIGNAL	72814	IN4009
A4A11 E1	293306		TERMINAL!DISCONNECT	71279	1019-2-901
A4A11 E2	293306		TERMINAL!DISCONNECT	71279	1019-2-901
A4A11 E3	293306		TERMINAL!DISCONNECT	71279	1019-2-901
A4A11 E4	293306		TERMINAL!DISCONNECT	71279	1019-2-901
A4A11 E5	293306		TERMINAL!DISCONNECT	71279	1019-2-901
A4A11 E6	293306		TERMINAL!DISCONNECT	71279	1019-2-901
A4A11 J1	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J2	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J3	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J4	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J5	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J6	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J7	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J8	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J9	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J10	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J11	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 J12	299235-001		CONNECTOR!RT ANGLE PC BD	98291	51-353-0000
A4A11 L1	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L2	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L3	299237-026		INDUCTOR!FXD MOLDED 1.8UH	99800	1025-026
A4A11 L4	299237-026		INDUCTOR!FXD MOLDED 1.8UH	99800	1025-026
A4A11 L5	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L6	299237-032		INDUCTOR!FXD MOLDED 3.3UH	99800	1025-032
A4A11 L7	299237-032		INDUCTOR!FXD MOLDED 3.3UH	99800	1025-032
A4A11 L8	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L9	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L10	299237-022		INDUCTOR!FXD MOLDED 1.2UH	99800	1025-022
A4A11 L11	299237-022		INDUCTOR!FXD MOLDED 1.2UH	99800	1025-022
A4A11 L12	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L13	299237-028		INDUCTOR!FXD MOLDED 2.2UH	99800	1025-028
A4A11 L14	299237-028		INDUCTOR!FXD MOLDED 2.2UH	99800	1025-028
A4A11 L15	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L16	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L17	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L18	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L19	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L20	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L21	299237-024		INDUCTOR!FXD MOLDED 1.5UH	99800	1025-024
A4A11 L22	299237-024		INDUCTOR!FXD MOLDED 1.5UH	99800	1025-024
A4A11 L23	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L24	299237-026		INDUCTOR!FXD MOLDED 1.8UH	99800	1025-026
A4A11 L25	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L26	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L27	299237-024		INDUCTOR!FXD MOLDED 1.5UH	99800	1025-024
A4A11 L28	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L29	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L30	299237-024		INDUCTOR!FXD MOLDED 1.5UH	99800	1025-024
A4A11 L31	299237-024		INDUCTOR!FXD MOLDED 1.5UH	99800	1025-024
A4A11 L32	299237-024		INDUCTOR!FXD MOLDED 1.5UH	99800	1025-024
A4A11 L33	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L34	299237-022		INDUCTOR!FXD MOLDED 1.2UH	99800	1025-022
A4A11 L35	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L36	299237-022		INDUCTOR!FXD MOLDED 1.2UH	99800	1025-022
A4A11 L37	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L38	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L39	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L40	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L41	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L42	299237-038		INDUCTOR!FXD MOLDED 5.6UH	99800	1025-038
A4A11 L43	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L44	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L45	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L46	299237-020		INDUCTOR!FXD MOLDED 1.00UH	99800	1025-020
A4A11 L47	299237-032		INDUCTOR!FXD MOLDED 3.3UH	99800	1025-032
A4A11 L48	299237-032		INDUCTOR!FXD MOLDED 3.3UH	99800	1025-032
A4A11 M1	231104-001		MIXER	15542	SRA-1
A4A11 M2	231104-001		MIXER	15542	SRA-1
A4A11 M3	231104-001		MIXER	15542	SRA-1
A4A11 M4	231104-001		MIXER	15542	SRA-1
A4A11 Q1	299239-001		TRANSISTOR!NPN SI	04713	2N5179
A4A11 Q2	294141		TRANSISTOR!NPN SI	04713	2N4124
A4A11 Q3	299239-001		TRANSISTOR!NPN SI	04713	2N5179
A4A11 Q4	299239-001		TRANSISTOR!NPN SI	04713	2N5179
A4A11 Q5	294172		TRANSISTOR!NPN SI	04713	MPS918
A4A11 Q6	294172		TRANSISTOR!NPN SI	04713	MPS918
A4A11 Q7	294172		TRANSISTOR!NPN SI	04713	MPS918
A4A11 Q8	294172		TRANSISTOR!NPN SI	04713	MPS918
A4A11 Q9	294153		TRANSISTOR!PNP SI	04713	2N4126
A4A11 Q10	294172		TRANSISTOR!NPN SI	04713	MPS918
A4A11 Q11	294153		TRANSISTOR!PNP SI	04713	2N4126
A4A11 Q12	294172		TRANSISTOR!NPN SI	04713	MPS918
A4A11 Q13	294172		TRANSISTOR!NPN SI	04713	MPS918
A4A11 Q14	294153		TRANSISTOR!PNP SI	04713	2N4126
A4A11 Q15	294172		TRANSISTOR!NPN SI	04713	MPS918

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A11 Q16	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q17	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q18	294153		TRANSISTORIPNP SI	04713	2N4126
A4A11 Q19	299289-001		TRANSISTORINPN SI	04713	2N5179
A4A11 Q20	294151		TRANSISTORINPN SI	04713	2N4124
A4A11 Q21	299289-001		TRANSISTORINPN SI	04713	2N5179
A4A11 Q22	294151		TRANSISTORINPN SI	04713	2N4124
A4A11 Q23	294151		TRANSISTORINPN SI	04713	2N4124
A4A11 Q24	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q25	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q26	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q27	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q28	294153		TRANSISTORIPNP SI	04713	2N4126
A4A11 Q29	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q30	294153		TRANSISTORIPNP SI	04713	2N4126
A4A11 Q31	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q32	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q33	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q34	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q35	294153		TRANSISTORIPNP SI	04713	2N4126
A4A11 Q36	294172		TRANSISTORINPN SI	04713	MPS918
A4A11 Q37	294153		TRANSISTORIPNP SI	04713	2N4126
A4A11 Q38	294151		TRANSISTORINPN SI	04713	2N4124
A4A11 Q39	294151		TRANSISTORINPN SI	04713	2N4124
A4A11 R1	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R2	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R3	299701-301		RESISTORIFXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A4A11 R4	299701-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A4A11 R5	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R6	299701-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A4A11 R7	299701-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A11 R8	299701-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A4A11 R9	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R10	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R11	299701-301		RESISTORIFXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A4A11 R12	299701-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A4A11 R13	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R14	299701-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A4A11 R15	299701-680		RESISTORIFXD CAR 68 OHM +-5% 1/4W	01121	RC07GF680J
A4A11 R16	299701-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A4A11 R17	299701-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A11 R18	299701-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A11 R19	299701-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A11 R20	299701-101		RESISTORIFXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A4A11 R21	299701-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A4A11 R22	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R23	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R24	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R25	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R26	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R27	299701-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A4A11 R28	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R29	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R30	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R32	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R33	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R34	299701-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A4A11 R35	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R36	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R37	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R38	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R39	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R40	299701-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A4A11 R41	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R42	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R43	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R44	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R45	299701-301		RESISTORIFXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A4A11 R46	299701-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A4A11 R47	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R48	299701-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A4A11 R49	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R50	299701-470		RESISTORIFXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A4A11 R51	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R52	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R53	299701-301		RESISTORIFXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A4A11 R54	299701-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A4A11 R55	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R56	299701-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A4A11 R57	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R58	299701-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A4A11 R59	299701-681		RESISTORIFXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A4A11 R60	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R61	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R62	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R63	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R64	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R65	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R66	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R67	299701-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A4A11 R68	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R69	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R70	299701-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A4A11 R71	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R72	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R73	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R74	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R75	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R76	299701-161		RESISTORIFXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A4A11 R77	299701-472		RESISTORIFXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A4A11 R78	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R79	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R80	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R81	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R82	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R83	299701-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A4A11 R84	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R85	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R86	299701-100		RESISTORIFXD CAR 10 OHM +-5% 1/4W	01121	RC07GF100J
A4A11 R87	299701-100		RESISTORIFXD CAR 10 OHM +-5% 1/4W	01121	RC07GF100J
A4A11 R88	299701-100		RESISTORIFXD CAR 10 OHM +-5% 1/4W	01121	RC07GF100J
A4A11 R89	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A4A11 R90	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A4A11 R91	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A4A11 R92	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A4A11 R93	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R94	299701-152		RESISTOR:FXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 R95	299701-102		RESISTOR:FXD CAP 1K +-5% 1/4W	01121	RC07GF102J
A4A11 R96	299701-152		RESISTOR:FXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A4A11 U1	293380		IC:TTL DUAL J-K FF	01295	SN74S113N
A4A11 U2	293380		IC:TTL DUAL J-K FF	01295	SN74S113N
A4A11 U3	293380		IC:TTL DUAL J-K FF	01295	SN74S113N
A4A11 U4	293496		IC:TTL DECADE COUNTER	18324	82S90
A4A11	298566		SOCKET:IC 14 PIN	01295	C931410
A4A11	298550		SOCKET:PIN	00779	1-331677-8
A5	298935		ASSY, FIXED FREQUENCY GEN	00752	298935
A5 FL1	293609		FILTER CONNECTOR	72982	1201-082
A5 FL2	293609		FILTER CONNECTOR	72982	1201-082
A5 FL3	293609		FILTER CONNECTOR	72982	1201-082
A5A1	298361		PWB ASSY, FIXED FREQUENCY INPUT	00752	298921
A5A1 C1	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A1 C2	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A1 C3	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A1 C4	299241-270		CAP:FXD DIP MICA 27PF +-5% 300WVDC	72136	DM5-270J
A5A1 C5	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A1 C6	299240-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A5A1 C7	299241-270		CAP:FXD DIP MICA 27PF +-5% 300WVDC	72136	DM5-270J
A5A1 C8	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A1 C9	299240-301		CAP:FXD DIP MICA 300PF +-5% 300WVDC	14655	CM04FC301J03
A5A1 C10	299241-070		CAP:FXD DIP MICA 7PF +-0.5PF 300WVDC	72136	DM5-070D
A5A1 C11	299240-301		CAP:FXD DIP MICA 300PF +-5% 300WVDC	14655	CM04FC301J03
A5A1 C12	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A1 C13	299241-120		CAP:FXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A5A1 C14	299240-301		CAP:FXD DIP MICA 300PF +-5% 300WVDC	14655	CM04FC301J03
A5A1 C15	299241-120		CAP:FXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A5A1 C16	299240-471		CAP:FXD DIP MICA 470PF +-5% 500WVDC	14655	CM06FD471J03
A5A1 C17	299350-471		CAP:FXD DIP MICA 470PF +-5% 500WVDC	14655	CM06FD471J03
A5A1 C18	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A1 C19	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A1 C20	299241-121		CAP:FXD DIP MICA 120PF	00752	
A5A1 C21	293916		CAP:VARIABLE	91293	
A5A1 C22	299241-121		CAP:FXD DIP MICA 120PF	00752	
A5A1 C23	299241-360		CAP:FXD DIP MICA 36PF	72136	DM5-360J
A5A1 E1	293306		TERMINAL SOLDER	71279	1597-2-01
A5A1 E2	293306		TERMINAL SOLDER	71279	1597-2-01
A5A1 J1	299285-001		CONNECTOR:RT ANGLE PC BD	98291	51-353-0000
A5A1 L1	299237-042		INDUCTOR:FXD MOLDED 8.2UH	99800	1025-042
A5A1 L2	299237-042		INDUCTOR:FXD MOLDED 8.2UH	99800	1025-042
A5A1 L3	231105-004		INDUCTOR:VAR .9UH	00752	231105-004
A5A1 L4	299237-056		INDUCTOR:FXD MOLDED 33UH	99800	1025-056
A5A1 L5	231105-004		INDUCTOR:VAR .9UH	00752	231105-004
A5A1 L6	231105-004		INDUCTOR:VAR .9UH	00752	231105-004
A5A1 L7	299237-056		INDUCTOR:FXD MOLDED 33UH	99800	1025-056
A5A1 L8	231105-004		INDUCTOR:VAR .9UH	00752	231105-004
A5A1 L9	231105-6		INDUCTOR: VARIABLE	99800	1025-048
A5A1 L10	231105-7		INDUCTOR: VARIABLE	99800	1025-048
A5A1 Q1	294151		TRANSISTOR:NPN SI	04713	2N4124
A5A1 Q2	294151		TRANSISTOR:NPN SI	04713	2N4124
A5A1 Q3	294157	2	TRANSISTOR:NPN SI	04713	2N3866
A5A1 R1	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A5A1 R2	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A1 R3	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A1 R4	299701-391		RESISTOR:FXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A1 R5	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A1 R6	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A1 R7	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A1 R8	299701-681		RESISTOR:FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A5A1 R9	299701-391		RESISTOR:FXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A1 R10	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A5A1 R11	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A1 R12	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A1 R13	299701-201		RESISTOR:FXD CAR 390 OHM +-5% 1/4W	01121	RC07GF201J
A5A1 R14	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A5A1 R15	299701-301		RESISTOR:FXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A5A1 Y1	298357-001	1	CRYSTAL:10 MHZ	00752	298357-1
A5A1	293996		TRANSIPAD	07047	10028-OAP
A5A2	298918		PWB ASSY, 10 MHZ OUTPUT AMP	00752	298918
A5A2 C1	299241-360	4	CAP:FXD DIP MICA 36PF +-5% 300WVDC	72136	DM5-360J
A5A2 C2	299250-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A5A2 C3	299241-360		CAP:FXD DIP MICA 36PF +-5% 300WVDC	72136	DM5-360J
A5A2 C4	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A2 C5	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A2 C6	299241-360		CAP:FXD DIP MICA 36PF +-5% 300WVDC	72136	DM5-360J
A5A2 C7	299241-360		CAP:FXD DIP MICA 36PF +-5% 300WVDC	72136	DM5-360J
A5A2 C8	299250-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A5A2 C9	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A2 C10	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A2 C11	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A2 C12	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A2 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A5A2 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A5A2 J1	299285-001		CONNECTOR:RT ANGLE PC BD	98291	51-353-0000
A5A2 J2	299285-001		CONNECTOR:RT ANGLE PC BD	98291	51-353-0000
A5A2 J3	299285-001		CONNECTOR:RT ANGLE PC BD	98291	51-353-0000
A5A2 L1	299237-042		INDUCTOR:FXD MOLDED 8.2UH	99800	1025-042
A5A2 L2	299237-042		INDUCTOR:FXD MOLDED 8.2UH	99800	1025-042
A5A2 L3	299237-056		INDUCTOR:FXD MOLDED 33UH	99800	1025-056
A5A2 L4	299237-042		INDUCTOR:FXD MOLDED 8.2UH	99800	1025-042
A5A2 L5	299237-042		INDUCTOR:FXD MOLDED 8.2UH	99800	1025-042
A5A2 L6	299237-056		INDUCTOR:FXD MOLDED 33UH	99800	1025-056
A5A2 Q1	294151		TRANSISTOR:NPN SI	04713	2N4124
A5A2 Q2	294151		TRANSISTOR:NPN SI	04713	2N4124
A5A2 R1	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A2 R2	299701-242		RESISTOR:FXD CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A2 R3	299701-391		RESISTOR:FXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A2 R4	299701-391		RESISTOR:FXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A2 R5	299701-391		RESISTOR:FXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A2 R6	299701-391		RESISTOR:FXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A3	298919		PWB ASSY, 60 MHZ GENERATOR	00752	298919
A5A3 C1	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A3 C2	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A3 C3	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A3 C4	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A3 C5	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A3 C6	299244-001		CAP:FXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A3 C7	299241-560		CAP:FXD DIP MICA 56PF +-5% 300WVDC	72136	DM5-560J

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A5A3 C8	299241-010	18	CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-010D
A5A3 C9	299241-560		CAPIFXD DIP MICA 56PF +-5% 300WVDC	72136	DM5-560J
A5A3 C10	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-010D
A5A3 C11	299241-560		CAPIFXD DIP MICA 56PF +-5% 300WVDC	72136	DM5-560J
A5A3 C12	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-010D
A5A3 C13	299241-070	6	CAPIFXD DIP MICA 7PF +-0.5PF 300WVDC	72136	DM5-070D
A5A3 C14	299241-560		CAPIFXD DIP MICA 56PF +-5% 300WVDC	72136	DM5-560J
A5A3 C15	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391JC3
A5A3 C16	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A3 C17	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A3 C18	299245-001		CAPIFXD CER .1UF +-20% 50WVDC	72982	8121-M058-W5R0-104M
A5A3 C19	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A3 C20	299241-070		CAPIFXD DIP MICA 7PF +-0.5PF 300WVDC	72136	DM5-070D
A5A3 C22	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A3 C24	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A3 C25	299245-001		CAPIFXD CER .1UF +-20% 50WVDC	72982	8121-M058-W5R0-104M
A5A3 C26	299240-001		CAPIFXD DIP TA 6.8UF +-20% 35WVDC	05397	T368B685M035AS
A5A3 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A5A3 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A5A3 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A5A3 J1	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A5A3 L1	299237-052	10	INDUCTORIFXD MOLDED 22UH	99800	1025-052
A5A3 L2	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A3 L3	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A3 L4	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A3 L5	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A3 L6	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A3 L7	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A3 L8	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A3 L9	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
A5A3 L10	299237-022		INDUCTORIFXD MOLDED 1.2UH	99800	1025-022
A5A3 L11	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A3 Q1	294171		TRANSISTORINPN SI	04713	2N4124
A5A3 Q2	299239-001		TRANSISTORINPN SI	04713	2N5179
A5A3 Q3	299239-001		TRANSISTORINPN SI	04713	2N5179
A5A3 R1	299701-362		RESISTORIFXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A3 R2	299701-242		RESISTORIFXD CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A3 R3	299701-391		RESISTORIFXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A3 R4	299701-391		RESISTORIFXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A3 R7	299701-103		RESISTORIFXD CAR 10K +-5% 1/4W	01121	RC07GF103J
A5A3 R8	299701-102		RESISTORIFXD CAR 1000 OHM +-5% 1/4W	01121	RC07GF102J
A5A3 R9	299701-362		RESISTORIFXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A3 R10	299701-242		RESISTORIFXD CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A3 R11	299701-391		RESISTORIFXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A3 R12	299701-471		RESISTORIFXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A5A4	298917		PWB ASSY, 65 MHZ GENERATOR	00752	298917
A5A4 C1	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A4 C2	299241-680		CAPIFXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A5A4 C3	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A4 C4	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A4 C5	299245-001		CAPIFXD CER .1UF +-20% 50WVDC	72982	8121-M058-W5R0-104M
A5A4 C7	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C8	299241-030	2	CAPIFXD DIP MICA 3PF +-0.5PF 300WVDC	72136	DM5-030D
A5A4 C9	293592-001		CAPIFXD DIP MICA 0.5PF +-0.5PF 300WVDC	93985	1C.5RC
A5A4 C10	299241-070		CAPIFXD DIP MICA 7PF +-0.5PF 300WVDC	72136	DM5-070D
A5A4 C11	293592-001		CAPIFXD DIP MICA 0.5PF +-0.5PF 300WVDC	93985	1C.5RC
A5A4 C12	299241-070		CAPIFXD DIP MICA 7PF +-0.5PF 300WVDC	72136	DM5-070D
A5A4 C13	293592-001		CAPIFXD DIP MICA 0.5PF +-0.5PF 300WVDC	93985	1C.5RC
A5A4 C15	299241-120		CAPIFXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A5A4 C16	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A4 C17	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C18	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C19	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C20	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C21	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C22	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C23	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C24	299241-101		CAPIFXD DIP MICA 100PF +-5% 300WVDC	72136	DM5-101J
A5A4 C25	299241-750		CAPIFXD DIP MICA 75PF +-5% 300WVDC	72136	DM5-750J
A5A4 C26	299241-020	3	CAPIFXD DIP MICA 2PF +-0.5PF 300WVDC	72136	DM5-020D
A5A4 C27	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A4 C28	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-010D
A5A4 C29	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A4 C30	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-010D
A5A4 C31	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A4 C32	299241-020		CAPIFXD DIP MICA 2PF +-0.5PF 300WVDC	72136	DM5-020D
A5A4 C33	299241-680		CAPIFXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A5A4 C34	299250-241		CAPIFXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241JC3
A5A4 C35	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A4 C36	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A4 C37	299240-002		CAPIFXD DIP TA 22UF +-20% 15WVDC	05397	T356B226M015AS
A5A4 C39	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A4 C40	299244-001		CAPIFXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A4 E1	293306		TERMINALIDISCONNECT	71279	1019-2-901
A5A4 E2	293306		TERMINALIDISCONNECT	71279	1019-2-901
A5A4 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A5A4 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A5A4 E5	293310		TERMINAL SOLDER	71279	1597-2-01
A5A4 J1	299235-001		CONNECTORIRT ANGLE PC BD	98291	51-353-0000
A5A4 L1	299237-052		INDUCTORIFXD MOLDED 22UH	99800	1025-052
A5A4 L2	299237-024		INDUCTORIFXD MOLDED 2.5UH	99800	1025-024
A5A4 L3	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A4 L4	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L5	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L6	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L7	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L8	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A4 L9	299237-024		INDUCTORIFXD MOLDED 1.8UH	99800	1025-024
A5A4 L10	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A4 L11	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A4 L12	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A4 L13	299237-038		INDUCTORIFXD MOLDED 5.6UH	99800	1025-038
A5A4 L14	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L15	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L16	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L17	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L18	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A4 L19	299237-052		INDUCTORIFXD MOLDED 22UH	99800	1025-052
A5A4 Q1	294172		TRANSISTORINPN SI	04713	MPS918
A5A4 Q2	294147		TRANSISTORINPN SI	04713	2N3866
A5A4 Q3	299239-001		TRANSISTORINPN SI	04713	2N5179

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A5A6 Q4	299289-001		TRANSISTORINPN SI	04713	2N8179
A5A6 R1	299701-362		RESISTORIFXO CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A6 R2	299701-242		RESISTORIFXO CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A6 R3	299701-242		RESISTORIFXO CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A6 R4	299701-681		RESISTORIFXO CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A5A6 R5	299701-270	1	RESISTORIFXO CAR 27 OHM +-5% 1/4W	01121	RC07GF270J
A5A6 R7	299701-362		RESISTORIFXO CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A6 R8	299701-242		RESISTORIFXO CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A6 R9	299701-201		RESISTORIFXO CAR 200 OHM +-5% 1/4W	01121	RC07GF201J
A5A6 R10	299701-102		RESISTORIFXO CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A6 R11	299701-362		RESISTORIFXO CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A6 R12	299701-242		RESISTORIFXO CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A6 R13	299701-391		RESISTORIFXO CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A6 R17	299701-102		RESISTORIFXO CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A6 U1	293550	1	ICIECL TYPE D FF	04713	MC1034P
A5A6	293566		SOCKETSIC 14 PIN	01295	C931410
A5A6	293596		TRANSIPAD	07047	10026-DAP
A5A6	293316		TERMINAL SOLDER	71279	1597-2-01
A5A5	298915		PWR ASSY, 64 MHZ GENERATOR	00752	298915
A5A5 C1	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A5 C2	299241-030		CAPIFXD DIP MICA 3PF +-0.5PF 300WVDC	72136	DM5-030D
A5A5 C3	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A5 C5	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-0100
A5A5 C6	299248-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C7	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A5 C8	299241-240		CAPIFXD DIP MICA 24PF +-5% 300WVDC	72136	DM5-240J
A5A5 C9	299241-020		CAPIFXD DIP MICA 2PF +-0.5PF 300WVDC	72136	DM5-0200
A5A5 C10	299241-330	3	CAPIFXD DIP MICA 33PF +-5% 300WVDC	72136	DM5-330J
A5A5 C11	299241-330		CAPIFXD DIP MICA 33PF +-5% 300WVDC	72136	DM5-330J
A5A5 C12	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-0100
A5A5 C13	299241-330		CAPIFXD DIP MICA 33PF +-5% 300WVDC	72136	DM5-330J
A5A5 C14	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-0100
A5A5 C15	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A5 C16	299250-131		CAPIFXD DIP MICA 130PF +-5% 500WVDC	14655	CM04FD131J03
A5A5 C17	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C18	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A5 C19	299241-070		CAPIFXD DIP MICA 7PF +-0.5PF 300WVDC	72136	DM5-0700
A5A5 C20	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A5 C21	299241-070		CAPIFXD DIP MICA 7PF +-0.5PF 300WVDC	72136	DM5-0700
A5A5 C22	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C23	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C24	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C25	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A5 C26	299241-020		CAPIFXD DIP MICA 2PF +-0.5PF 300WVDC	72136	DM5-0200
A5A5 C27	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A5 C28	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-0100
A5A5 C29	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A5 C30	299241-010		CAPIFXD DIP MICA 1PF +-0.5PF 300WVDC	72136	DM5-0100
A5A5 C31	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A5 C32	299241-020		CAPIFXD DIP MICA 2PF +-0.5PF 300WVDC	72136	DM5-0200
A5A5 C33	299241-680		CAPIFXD DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A5A5 C34	299250-241		CAPIFXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A5A5 C35	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C36	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C37	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C38	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C39	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A5 C40	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A5 C41	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A5 C42	299244-001		CAPIFXD CER DISC .01UF -20+80% 1000WVDC	56289	C023F501C103Z
A5A5 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A5A5 E2	293316		TERMINAL SOLDER	71279	1597-2-01
A5A5 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A5A5 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A5A5 E5	293310		TERMINAL SOLDER	71279	1597-2-01
A5A5 E6	293310		TERMINAL SOLDER	71279	1597-2-01
A5A5 J1	299285-001		CONNECTORIRT ANGLE PC 8D	98291	91-553-0008
A5A5 L1	299237-052		INDUCTORIFXO MOLDED 22UH	99800	1025-052
A5A5 L2	299237-052		INDUCTORIFXO MOLDED 22UH	99800	1025-052
A5A5 L3	299237-032		INDUCTORIFXO MOLDED 3.3UH	99800	1025-032
A5A5 L4	299237-038		INDUCTORIFXO MOLDED 5.6UH	99800	1025-038
A5A5 L5	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L6	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L7	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L8	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L9	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L10	299237-052		INDUCTORIFXO MOLDED 22UH	99800	1025-052
A5A5 L11	299237-032		INDUCTORIFXO MOLDED 3.3UH	99800	1025-032
A5A5 L12	299237-020		INDUCTORIFXO MOLDED 1.00UH	99800	1025-020
A5A5 L13	299237-020		INDUCTORIFXO MOLDED 1.00UH	99800	1025-020
A5A5 L14	299237-032		INDUCTORIFXO MOLDED 3.3UH	99800	1025-032
A5A5 L15	299237-038		INDUCTORIFXO MOLDED 5.6UH	99800	1025-038
A5A5 L16	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L17	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L18	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L19	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L20	231105-001		INDUCTORIVAR .133UH	00752	231105-001
A5A5 L21	299237-020		INDUCTORIFXO MOLDED 1.00UH	99800	1025-020
A5A5 Q1	294101		TRANSISTORINPN SI	04713	2N4124
A5A5 Q2	299289-001		TRANSISTORINPN SI	04713	2N5179
A5A5 Q3	299289-001		TRANSISTORINPN SI	04713	2N5179
A5A5 Q4	299289-001		TRANSISTORINPN SI	04713	2N5179
A5A5 R1	299701-362		RESISTORIFXO CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A5 R2	299701-242		RESISTORIFXO CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A5 R3	299701-301		RESISTORIFXO CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A5A5 R4	299701-102		RESISTORIFXO CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A5 R5	299701-103		RESISTORIFXO CAR 10K +-5% 1/4W	01121	RC07GF103J
A5A5 R6	299701-102		RESISTORIFXO CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A5 R7	299701-101		RESISTORIFXO CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A5A5 R8	299701-362		RESISTORIFXO CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A5 R9	299701-242		RESISTORIFXO CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A5 R10	299701-391		RESISTORIFXO CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A5 R11	299701-391		RESISTORIFXO CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A5 R12	299701-301		RESISTORIFXO CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A5A5 R14	299701-362		RESISTORIFXO CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A5A5 R15	299701-242		RESISTORIFXO CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A5 R16	299701-102		RESISTORIFXO CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A5 R17	299701-242		RESISTORIFXO CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A5A5 R22	299701-152		RESISTORIFXO CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A5A5 R23	299701-391		RESISTORIFXO CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A5A5 U1	293380		ICITTL DUAL J-K FF	01295	SN74S113N

Reference Designation		AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A5A5	U2	293350		IC:TTL DUAL J-K FF	01295	SN74S113N
A5A5		294566		SOCKET:IC 14 PIN	01295	C931410
A5A5		294566		SOCKET:IC 14 PIN	01295	C931410
A5A6		298926		PWB ASSY, 35/35.5 MHZ GENERATOR	00752	298926
A5A6	C1	299244-001		CAP:FXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A6	C2	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-0500
A5A6	C3	299244-001		CAP:FXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A6	C4	299244-001		CAP:FXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A6	C5	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A6	C6	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-0500
A5A6	C7	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C9	299250-131		CAP:FXD DIP MICA 130PF +-5% 500WVDC	14655	CM04FD131J03
A5A6	C10	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A6	C11	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-0500
A5A6	C12	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C13	299240-001		CAP:FXD DIP TA 6.8UF +-20% 35WVDC	05397	T368B685M035AS
A5A6	C14	299240-001		CAP:FXD DIP TA 6.8UF +-20% 35WVDC	05397	T368B685M035AS
A5A6	C15	299244-001		CAP:FXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A6	C16	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C17	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C18	299244-001		CAP:FXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A6	C19	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C20	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C21	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C22	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C23	299244-001		CAP:FXD CER DISC .01UF +20-80% 1000WVDC	56289	C023F501C103Z
A5A6	C24	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C25	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C26	299250-241		CAP:FXD DIP MICA 240PF +-5% 500WVDC	14655	CM04FD241J03
A5A6	C27	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C28	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C29	299241-430		CAP:FXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A5A6	C30	299250-301		CAP:FXD DIP MICA 300PF +-5% 500WVDC	14655	CM04FC301J03
A5A6	C31	299241-040		CAP:FXD DIP MICA 4PF +-0.5PF 300WVDC	72136	DM5-0400
A5A6	C32	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	C33	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A5A6	CR1	293200		DIODE SIGNAL	01295	1N645
A5A6	E1	293310		TERMINAL SOLDER	71279	1597-2-01
A5A6	E2	293310		TERMINAL SOLDER	71279	1597-2-01
A5A6	E3	293310		TERMINAL SOLDER	71279	1597-2-01
A5A6	E4	293310		TERMINAL SOLDER	71279	1597-2-01
A5A6	E5	293310		TERMINAL SOLDER	71279	1597-2-01
A5A6	J6	299235-001		CONNECTOR:RT ANGLE PC BD	98291	51-353-0000
A5A6	L1	299237-020		INDUCTOR:FXD MOLDED 1.00UH	99800	1025-020
A5A6	L2	299237-022		INDUCTOR:FXD MOLDED 1.2UH	99800	1025-022
A5A6	L3	231105-001		INDUCTOR:VAR .133UH	00752	231105-001
A5A6	L4	299237-052		INDUCTOR:FXD MOLDED 22UH	99800	1025-052
A5A6	L5	299237-020		INDUCTOR:FXD MOLDED 1.00UH	99800	1025-020
A5A6	L6	299237-038		INDUCTOR:FXD MOLDED 5.6UH	99800	1025-038
A5A6	L7	299237-052		INDUCTOR:FXD MOLDED 22UH	99800	1025-052
A5A6	L8	299237-052		INDUCTOR:FXD MOLDED 22UH	99800	1025-052
A5A6	L9	299237-038		INDUCTOR:FXD MOLDED 5.6UH	99800	1025-038
A5A6	L10	231105-001		INDUCTOR:VAR .133UH	00752	231105-001
A5A6	L11	299237-020		INDUCTOR:FXD MOLDED 1.00UH	99800	1025-020
A5A6	L12	299237-052		INDUCTOR:FXD MOLDED 22UH	99800	1025-052
A5A6	Q1	294172		TRANSISTOR:NPN SI	04713	MPS918
A5A6	Q2	294172		TRANSISTOR:NPN SI	04713	MPS918
A5A6	Q3	294151		TRANSISTOR:NPN SI	04713	2N4124
A5A6	Q4	294172		TRANSISTOR:NPN SI	04713	MPS918
A5A6	Q5	294172		TRANSISTOR:NPN SI	04713	MPS918
A5A6	Q6	294172		TRANSISTOR:NPN SI	04713	MPS918
A5A6	Q7	294151		TRANSISTOR:NPN SI	04713	2N4124
A5A6	Q8	294153		TRANSISTOR:PNP SI	04713	2N4126
A5A6	R1	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R2	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R3	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A6	R4	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A5A6	R5	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R6	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R7	299701-180		RESISTOR:FXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A5A6	R8	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A6	R9	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R10	299701-681		RESISTOR:FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A5A6	R11	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R12	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R13	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A5A6	R14	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A6	R15	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R16	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R17	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A5A6	R18	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A6	R19	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A5A6	R20	299701-101		RESISTOR:FXD CAP 100 OHM +-5% 1/4W	01121	RC07GF101J
A5A6	R21	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R22	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A5A6	R23	299701-180		RESISTOR:FXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A5A6	R24	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A5A6	R25	299701-681		RESISTOR:FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A5A6	R26	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A5A6	R27	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A5A6	R28	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A5A6	R29	299701-201		RESISTOR:FXD CAR 200 OHM +-5% 1/4W	01121	RC07GF201J
A5A6	U1	293350		IC:TTL DUAL J-K FF	01295	SN74S113N
A5A6	U2	293496		IC:TTL DECADE COUNTER	18324	82S90
A5A6		294566		SOCKET:IC 14 PIN	01295	C931410
A5A6		294566		SOCKET:IC 14 PIN	01295	C931410
A11A1		298997		PWB ASSY, POWER SUPPLY RECT/FILT	00752	298997
A11A1	C1	293911	4	CAP:FXD AL 2200UF 825 -10%+50%	52763	EG2T/25
A11A1	C2	293911		CAP:FXD AL 2200UF 825 -10%+50%	52763	EG2T/25
A11A1	C3	293911		CAP:FXD AL 2200UF 825 -10%+50%	52763	EG2T/25
A11A1	C4	293911		CAP:FXD AL 2200UF 825 -10%+50%	52763	EG2T/25
A11A1	C5	293912	4	CAP:FXD AL 2200UF 35/40V -10%+50%	52763	EG2T/40
A11A1	C6	293912		CAP:FXD AL 2200UF 35/40V -10%+50%	52763	EG2T/40
A11A1	C7	293912		CAP:FXD AL 2200UF 35/40V -10%+50%	52763	EG2T/40
A11A1	C8	293912		CAP:FXD AL 2200UF 35/40V -10%+50%	52763	EG2T/40
A11A1	E1	293050	1	TERMINAL:DISCONNECT	71279	61137-1
A11A1	F1	294713	2	FUSE: 1AG 32V 7.5AMP	75915	30107-5
A11A1	F2	294713		FUSE: 1AG 32V 7.5AMP	75915	30107-5
A11A1		294930		FUSE CLIP PC MOUNT	75915	102048
A11A1		294929		COMPONENT CLIP	91506	6020-418
A11A1	R1		2	RESISTOR: 2K +-5% 1/2W	01121	RC20GF202J
	R2			RESISTOR: 2K +-5% 1/2W	01121	RC20GF202J

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A11A1	298926		COMPONENT CLIP	91506	6019-41A
A11A1	299258		INSULATOR:COMP CLIP	00752	299258
A11A2	298958		PWB ASSY, +5.2 VOLT REGULATOR	00752	298998
A11A2 C1	293919	4	CAPACITOR AL 200UF -10%+75% 25WVDC	56289	TE1213
A11A2 C2	293915	2	CAPACITOR CER DISC .02UF +-20% 100WVDC	56289	TG520
A11A2 C3	293919		CAPACITOR AL 200UF -10%+75% 25WVDC	56289	TE1213
A11A2 C4	299260-471		CAPACITOR DIP MICA 470PF +-5% 500WVDC	14655	CM06FD471J03
A11A2 C5	293890	6	CAPACITOR AL 100UF -10%+75% 25WVDC	56289	TE1211
A11A2 C6	293919		CAPACITOR AL 200UF -10%+75% 25WVDC	56289	TE1213
A11A2 CR1	293202	4	DIODE RECTIFIER	04713	1N4001
A11A2 CR2	293202		DIODE RECTIFIER	04713	1N4001
A11A2 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A11A2 R1	299718	2	RESISTOR:FXD MLD .05 OHM 3% 2W	91637	LVR-2
A11A2 R2	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A11A2 R3	299709-322	8	RESISTOR:FXD FLM 1K +-1% 1/4W	01121	RN60C1001F
A11A2 R4	299709-418	2	RESISTOR:FXD FLM 10K +-1% 1/4W	01121	RN60C1002F
A11A2 R5	299711-359		RESISTOR:FXD FLM 2.43K +-1% 1/4W	01121	RN60D2431F
A11A2 R6	299711-411	2	RESISTOR:FXD FLM 6.04K +-1% 1/4W	01121	RN60D6041F
A11A2 R7	299701-681		RESISTOR:FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A11A2 R8	299701-681		RESISTOR:FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A11A2 R9	299701-282		RESISTOR:FXD CAR 2.8K +-5% 1/4W	01121	RC07GF282J
A11A2 R10	299722	2	RESISTOR:VAR 100 OHM 3/4W	80294	3009P-1-101
A11A2 R11	299701-391		RESISTOR:FXD CAR 390 OHM +-5% 1/4W	01121	RC07GF391J
A11A2 U1	293302	2	IC:LIN VOLTAGE REGULATOR	04713	MC1723CL
A11A2 U2	293389	2	IC:LIN OP AMP	72514	UA741TC
A11A3	299210		PWB ASSY, -12 VOLT REGULATOR	00752	299200
A11A3 C1	293919		CAPACITOR AL 200UF -10%+75% 25WVDC	56289	TE1213
A11A3 C2	293915		CAPACITOR CER DISC .02UF +-20% 100WVDC	56289	TG520
A11A3 C3	299260-471		CAPACITOR DIP MICA 470PF +-5% 500WVDC	14655	CM06FD471J03
A11A3 C4	293890		CAPACITOR AL 100UF -10%+75% 25WVDC	56289	TE1211
A11A3 C5	293890		CAPACITOR AL 100UF -10%+75% 25WVDC	56289	TE1211
A11A3 C6	293890		CAPACITOR AL 100UF -10%+75% 25WVDC	56289	TE1211
A11A3 CR1	293202		DIODE RECTIFIER	04713	1N4001
A11A3 CR2	293202		DIODE RECTIFIER	04713	1N4001
A11A3 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A11A3 R1	299718		RESISTOR:FXD MLD .05 OHM 3% 2W	91637	LVR-2
A11A3 R2	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A11A3 R3	299709-322		RESISTOR:FXD FLM 1K +-1% 1/4W	01121	RN60C1001F
A11A3 R4	299709-418		RESISTOR:FXD FLM 10K +-1% 1/4W	01121	RN60C1002F
A11A3 R5	299709-322		RESISTOR:FXD FLM 1K +-1% 1/4W	01121	RN60C1001F
A11A3 R6	299711-411		RESISTOR:FXD FLM 6.04K +-1% 1/4W	01121	RN60D6041F
A11A3 R7	299701-301		RESISTOR:FXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A11A3 R8	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A11A3 R9	299722		RESISTOR:VAR 100 OHM 3/4W	80294	3009P-1-101
A11A3 R10	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A11A3 R11	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A11A3 R12	299701-180		RESISTOR:FXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A11A3 U1	293302		IC:LIN VOLTAGE REGULATOR	04713	MC1723CL
A11A3 U2	293389		IC:LIN OP AMP	72514	UA741TC
A11A4	298928		PWB ASSY, POWER SUPPLY MOTHERBD	00752	298928
A11A4 J1	294469	3	CONNECTOR:PC EDGE	05574	3VH10/1J12
A11A4 J2	294469		CONNECTOR:PC EDGE	05574	3VH10/1J12
A11A4 J3	294469		CONNECTOR:PC EDGE	05574	3VH10/1J12
A11A4	293079		MOD II POST	00779	86091-4
A12	298932		ASSY, REAR PANEL	00752	298932
A12 BR1	294772	2	RECT BRIDGE 25A	13409	S25A10
A12 BR2	294772		RECT BRIDGE 25A	13409	S25A10
A12 C1	299245-001		CAPACITOR CER .1UF +-20% 50WVDC	72982	8121-MC5B-W5R0-104M
A12 C2	299245-001		CAPACITOR CER .1UF +-20% 50WVDC	72982	8121-MC5B-W5R0-104M
A12 F1	294714	2	FUSE: 3AB 250V 2.5AMP	75915	32302-5
A12 F2	294714		FUSE: 3AB 250V 2.5AMP	75915	32302-5
A12 Q1	294175	2	TRANSISTOR:AR NPN SI	04713	2N6055
A12 Q2	294175		TRANSISTOR:AR NPN SI	04713	2N6055
A12 S1		1			
A12 XF1	294492	2	FUSEHOLDER	75915	342004AL
A12 XF2	294492		FUSEHOLDER	75915	342004AL
A12	299256-001		FAN	28875	MWSZ107FL-7
A12	299269		FAN FILTER	00752	299289
A12					
A12	299269		HEAT SINK	08730	HS6029-1-0-3
A12	298362		TRANSFORMER	00752	
A12	294545		SLIDE SWITCH	00752	SW4421
A12	294787		RELAY	82050	BC69-10
A12A1	299261		PWB ASSY, RELAY	00752	299261
A12A1 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A12A1 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A12A1 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A12A1 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A12A1 R1	299708-200	1	RESISTOR:FXD CAR 20 OHM +-5% 1/2W	01121	RC32GF200J
A14	299201		PWB ASSY, LOGIC/POWER DIST	00752	299201
A14 C1	293890		CAPACITOR AL 100UF -10%+75% 25WVDC	56289	TE1211
A14 C2	293890		CAPACITOR AL 100UF -10%+75% 25WVDC	56289	TE1211
A14 CR1	293203	1	DIODE ZENER 6.2V +-5%	04713	1N753A
A14 CR2	293209	1	DIODE ZENER 15V +-5%	04713	1N30248
A14 CR3	293241	1	DIODE	30992	VZ16UC1
A14 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A14 R1	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A14 R2	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A14 R3	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A14 R4	299701-101		RESISTOR:FXD CAR 100 OHM +-5% 1/4W	01121	RC07GF101J
A14 R5	299701-681		RESISTOR:FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A14 R6	299701-161		RESISTOR:FXD CAR 160 OHM +-5% 1/4W	01121	RC07GF161J
A14 SCR1	294154	2	RECTIFIER:SILICON CONTROLLED	04713	2N4172
A14 SCR2	294154		RECTIFIER:SILICON CONTROLLED	04713	2N4172
A14	293079		MOD II POST	00779	86091-4
A14	299932		HEADER:DOUBLE ROW STRAIGHT POST 26 POS	00779	1-87227-3
A14	293979		STANDOFF	71279	650-1498-10-07

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A6	298938		ASSY, 24-33 MHZ OSCILLATOR	00752	298938
A6 FL1	293609	10	FILTER CONNECTOR	72982	1201-082
A6 FL2	293609		FILTER CONNECTOR	72982	1201-082
A6 FL3	293609		FILTER CONNECTOR	72982	1201-082
A6 FL4	293609		FILTER CONNECTOR	72982	1201-082
A6 FL5	293609		FILTER CONNECTOR	72982	1201-082
A6 FL6	293609		FILTER CONNECTOR	72982	1201-082
A6 J1	299283	10	CONNECTORIST BULKHEAD	98291	51-045-0000
A6 J2	299288		CONNECTORIST BULKHEAD	98291	51-045-0000
A6A1	298949		PWB ASSY, 24-33 OSCILLATOR	00752	298949
A6A1 C1	299253-001	7	CAPIFXD POR 2.7PF +-0.5PF 500WVDC	95275	VY10CA2R7DER
A6A1 C2	299241-430	11	CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C3	293593	32	CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C4	299250-391	12	CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C5	299253-001		CAPIFXD POR 2.7PF +-0.5PF 500WVDC	95275	VY10CA2R7DER
A6A1 C6	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C7	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C8	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C9	299253-001		CAPIFXD POR 2.7PF +-0.5PF 500WVDC	95275	VY10CA2R7DER
A6A1 C10	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C11	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C12	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C13	299253-001		CAPIFXD POR 2.7PF +-0.5PF 500WVDC	95275	VY10CA2R7DER
A6A1 C14	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C15	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C16	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C17	299253-002	3	CAPIFXD POR 8.2PF +-5% 500WVDC	95275	VY10A8R2JE
A6A1 C18	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C19	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C20	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C21	299253-001		CAPIFXD POR 2.7PF +-0.5PF 500WVDC	95275	VY10CA2R7DER
A6A1 C22	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C23	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C24	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C25	299253-001		CAPIFXD POR 2.7PF +-0.5PF 500WVDC	95275	VY10CA2R7DER
A6A1 C26	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C27	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C28	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C29	299253-001		CAPIFXD POR 2.7PF +-0.5PF 500WVDC	95275	VY10CA2R7DER
A6A1 C30	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C31	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C32	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C33	299253-002		CAPIFXD POR 8.2PF +-5% 500WVDC	95275	VY10A8R2JE
A6A1 C34	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C35	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C36	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C37	299253-002		CAPIFXD POR 8.2PF +-5% 500WVDC	95275	VY10A8R2JE
A6A1 C38	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A6A1 C39	293593		CAPIVAR TRMR 2-8PF	91293	8090
A6A1 C40	299250-391		CAPIFXD DIP MICA 390PF +-5% 100WVDC	14655	CM04FA391J03
A6A1 C41	299243-001	109	CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C42	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C43	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C44	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C45	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C46	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C48	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C49	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C50	299240-001	9	CAPIFXD DIP TA 6.8UF +-20% 35WVDC	05397	T368B685M035AS
A6A1 C51	299240-001		CAPIFXD DIP TA 6.8UF +-20% 35WVDC	05397	T368B685M035AS
A6A1 C52	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C53	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 C54	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A6A1 E1	293306	25	TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E2	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E3	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E4	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E5	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E6	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E7	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E8	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E9	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E10	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 E11	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A6A1 L1	299237-028	11	INDUCTOR,FXD MOLDED 2.2UH	99800	1025-028
A6A1 L2	299237-028		INDUCTOR,FXD MOLDED 2.2UH	99800	1025-028
A6A1 L3	299237-028		INDUCTOR,FXD MOLDED 2.2UH	99800	1025-028
A6A1 L4	299237-028		INDUCTOR,FXD MOLDED 2.2UH	99800	1025-028
A6A1 L5	299237-028		INDUCTOR,FXD MOLDED 2.2UH	99800	1025-028
A6A1 L6	299237-028		INDUCTOR,FXD MOLDED 2.2UH	99800	1025-028
A6A1 L7	299237-028		INDUCTOR,FXD MOLDED 2.2UH	99800	1025-028
A6A1 L8	299237-028		INDUCTOR,FXD MOLDED 2.2UH	99800	1025-028
A6A1 Q1	294172	16	TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q2	299255	14	TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q3	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q4	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q5	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q6	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q7	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q8	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q9	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q10	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q11	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q12	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q13	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q14	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q15	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q16	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q17	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q18	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q19	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 Q20	299255		TRANSISTOR,PNP SI	04713	2N4126
A6A1 Q21	294172		TRANSISTOR,NPN SI	04713	MPS918
A6A1 R1	299701-203	18	RESISTOR,FXD CAR 20K +-5% 1/4W	01121	RC07GF203J
A6A1 R2	299701-822	26	RESISTOR,FXD CAR 8.2K +-5% 1/4W	01121	RC07GF822J
A6A1 R3	299701-822		RESISTOR,FXD CAR 8.2K +-5% 1/4W	01121	RC07GF822J
A6A1 R4	299701-472	41	RESISTOR,FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A6A1 R5	299701-152	17	RESISTOR,FXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A6A1 R6	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R7	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R8	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R9	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R10	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R11	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R12	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R13	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R14	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R15	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R16	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R17	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R18	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R19	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R20	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R21	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R22	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R23	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R24	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R25	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R26	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R27	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R28	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R29	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R30	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R31	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R32	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R33	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R34	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R35	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R36	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R37	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R38	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R39	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R40	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R41	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R42	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R43	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R44	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R45	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R46	299701-208		RESISTORIFXD CAR 20K ~+5% 1/4W	01121	RC07GF203J
A6A1 R47	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R48	299701-822		RESISTORIFXD CAR 8.2K ~+5% 1/4W	01121	RC07GF822J
A6A1 R49	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R50	299701-152		RESISTORIFXD CAR 1.5K ~+5% 1/4W	01121	RC07GF152J
A6A1 R51	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R52	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A1 R53	299701-301	9	RESISTOPIFXD CAR 300 OHM ~+5% 1/4W	01121	RC07GF301J
A6A1 R55	299701-301	6	RESISTORIFXD CAR 300 OHM ~+5% 1/4W	01121	RC07GF301J
A6A1 R56	299701-470	17	RESISTORIFXD CAR 47 OHM ~+5% 1/4W	01121	RC07GF470J
A6A1 U1	299501	1	ICITTL 4 TO 10 LINE DECODER	01295	SN7442N
A6A1 U2	293380	4	ICITTL DUAL J-K FF	01295	SN74S113N
A6A1	294567		SOCKETIIC 16 PIN	01295	C931610
A6A1	294566		SOCKETIIC 14 PIN	01295	C931410
A6A2	298952		PWB ASSY, ISOL/DIVIDER	00752	298952
A6A2 C1	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A2 C2	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A2 C3	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A2 C4	299241-360	7	CAPIFXU DIP MICA 36PF ~+5% 300WVDC	72136	DM5-360J
A6A2 C5	299250-241	6	CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM06FD241J03
A6A2 C6	299241-200	2	CAPIFXU DIP MICA 20PF ~+5% 300WVDC	72136	DM5-200J
A6A2 C7	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM06FD241J03
A6A2 C8	299241-360		CAPIFXD DIP MICA 36PF ~+5% 300WVDC	72136	DM5-360J
A6A2 C9	299248-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A2 E1	293310	14	TERMINAL SOLDER	71279	1597-2-01
A6A2 E9	293310		TERMINAL SOLDER	71279	1597-2-01
A6A2 E8	293310		TERMINAL SOLDER	71279	1597-2-01
A6A2 L1	299287-042	9	INDUCTORIFXD MOLDED 0.42UH	99800	1025-042
A6A2 L2	299237-020	9	INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
A6A2 L3	299237-000	4	INDUCTORIFXD MOLDED .15UH	99800	1025-00
A6A2 L4	299237-024	2	INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A6A2 L5	299237-000		INDUCTORIFXD MOLDED .15UH	99800	1025-00
A6A2 L6	299237-020		INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
A6A2 Q1	294172		TRANSISTORINPN SI	04713	MPS918
A6A2 R1	299701-680	6	RESISTORIFXD CAR 68 OHM ~+5% 1/4W	01121	RC07GF680J
A6A2 R2	299701-101	6	RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A6A2 R3	299701-470		RESISTORIFXD CAR 47 OHM ~+5% 1/4W	01121	RC07GF470J
A6A2 R4	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A2 R5	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A2 R6	299701-471	9	RESISTORIFXD CAR 470 OHM ~+5% 1/4W	01121	RC07GF471J
A6A2 R7	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A6A2 R8	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A6A2 R9	299701-470		RESISTORIFXD CAR 47 OHM ~+5% 1/4W	01121	RC07GF470J
A6A2 R10	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A6A2	294580		SOCKETIPIN	00779	1-331677-8
A6A3	298953		PWB ASSY, ISOL/AMPL	00752	298953
A6A3 C1	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A3 C2	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A3 C3	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A3 C4	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A3 C5	299243-001		CAPIFXU CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A3 C6	299248-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A3 C7	299241-360		CAPIFXD DIP MICA 36PF ~+5% 300WVDC	72136	DM5-360J
A6A3 C8	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM06FD241J03
A6A3 C9	299241-200		CAPIFXD DIP MICA 20PF ~+5% 300WVDC	72136	DM5-200J
A6A3 C10	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM06FD241J03
A6A3 C11	299241-360		CAPIFXD DIP MICA 36PF ~+5% 300WVDC	72136	DM5-360J
A6A3 C12	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A6A3 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A6A3 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A6A3 L2	299287-048	11	INDUCTORIFXD MOLDED 1BUH	99800	1025-048
A6A3 L3	299237-020		INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
A6A3 L4	299237-000		INDUCTORIFXD MOLDED .15UH	99800	1025-00
A6A3 L5	299237-024		INDUCTORIFXD MOLDED 1.5UH	99800	1025-024
A6A3 L6	299237-000		INDUCTORIFXD MOLDED .15UH	99800	1025-00
A6A3 L7	299257-020		INDUCTORIFXD MOLDED 1.00UH	99800	1025-020
A6A3 Q1	294172		TRANSISTORINPN SI	04713	MPS918
A6A3 Q2	294172		TRANSISTORINPN SI	04713	MPS918
A6A3 R1	299701-680		RESISTORIFXD CAR 68 OHM ~+5% 1/4W	01121	RC07GF680J
A6A3 R2	299701-470		RESISTORIFXD CAR 47 OHM ~+5% 1/4W	01121	RC07GF470J

Reference Designation		AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A6A3	R3	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A3	R4	299701-472		RESISTORIFXD CAR 4.7K ~+5% 1/4W	01121	RC07GF472J
A6A3	R5	299701-301		RESISTORIFXD CAR 300 OHM ~+5% 1/4W	01121	RC07GF301J
A6A3	R6	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A6A3	R7	299701-622	18	RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A6A3	R8	299701-362	4	RESISTORIFXD CAR 3.6K ~+5% 1/4W	01121	RC07GF362J
A6A3	R9	299701-101		RESISTORIFXD CAR 100 OHM ~+5% 1/4W	01121	RC07GF101J
A6A3	R10	299701-201		RESISTORIFXD CAR 200 OHM ~+5% 1/4W	01121	RC07GF201J
A6A3	R11	299701-180	12	RESISTORIFXD CAR 18 OHM ~+5% 1/4W	01121	RC07GF180J
A6A3	R12	299701-301		RESISTORIFXD CAR 300 OHM ~+5% 1/4W	01121	RC07GF301J
A7		298961		ASSY, 366 FILTER AMP	00752	298961
A7	C1	295374		CAPAC: 3-10PF	91293	5201
A7	C2	295374		CAPAC: 3-10PF	91293	5201
A7	C3	295374		CAPAC: 3-10PF	91293	5201
A7	C4	295374		CAPAC: 3-10PF	91293	5201
A7	FL1	293609		FILTER CONNECTOR	72982	1201-082
A7	J1	299233		CONNECTORIST BULKHEAD	98291	51-045-0000
A7	J2	299233		CONNECTORIST BULKHEAD	98291	51-045-0000
A7	J3	299233		CONNECTORIST BULKHEAD	98291	51-045-0000
A7	J4	299233		CONNECTORIST BULKHEAD	98291	51-045-0000
A7A1		298962		PWB ASSY, 366 FILT/CONV INPUT	00752	298962
A7A1	C1	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A7A1	C2	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A1	C3	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A1	C4	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A1	C5	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A1	C6	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A1	C7	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A7A1	C8	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A2		298963		PWB ASSY, 366 FILT/CONV OUTPUT	00752	298963
A7A2	C9	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A2	C10	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A2	C11	299240-001		CAPIFXD DIP TA 6.8UF ~+20% 35WVDC	05397	T368B685M035AS
A7A2	C12	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A2	C13	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A7A2	C14	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A2	C15	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A2	C16	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A2	C17	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A7A2	C18	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A7A2	C19	299250-471	6	CAPIFXD DIP MICA 470PF ~+5% 500WVDC	14655	CM06FD471J03
A7A2	C20	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A7A2	C21	299250-241		CAPIFXD DIP MICA 240PF ~+5% 500WVDC	14655	CM04FD241J03
A7A2	C22	299250-471		CAPIFXD DIP MICA 470PF ~+5% 500WVDC	14655	CM06FD471J03
A7A2	E2	293310		TERMINAL SOLDER	71279	1597-2-01
A7A2	E3	293310		TERMINAL SOLDER	71279	1597-2-01
A7A2	L3	299237-012	32	INDUCTORIFXD MOLDED .47UH	99800	1025-012
A7A2	L4	299237-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A7A2	L5	299237-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A7A2	L6	299237-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A7A2	L7	231105-001	5	INDUCTORIVAR .133UH	00752	231105-001
A7A2	L8	299237-026	1	INDUCTORIFXD MOLDED 1.8UH	99800	1025-026
A7A2	M2	231104-002	1	MIXER	21912	M0108
A7A2	Q3	299239-001	21	TRANSISTORINPN SI	04713	2N5179
A7A2	Q4	299239-001		TRANSISTORINPN SI	04713	2N5179
A7A2	R11	299701-180		RESISTORIFXD CAR 18 OHM ~+5% 1/4W	01121	RC07GF180J
A7A2	R12	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A7A2	R13	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A7A2	R14	299701-102	17	RESISTORIFXD CAR 1K ~+5% 1/4W	01121	RC07GF102J
A7A2	R15	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A7A2	R16	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A7A2	R17	299701-102		RESISTORIFXD CAR 1K ~+5% 1/4W	01121	RC07GF102J
A7A2		294450		SOCKETIPIN	00779	1-331677-8
A8		298954		ASSY, 361-370 FILTER AMP	00752	298954
A8	C1	295374		CAPAC: 3-10PF	91293	5201
A8	C2	295374		CAPAC: 3-10PF	91293	5201
A8	C3	295374		CAPAC: 3-10PF	91293	5201
A8	C4	295374		CAPAC: 3-10PF	91293	5201
A8	C5	295374		CAPAC: 3-10PF	91293	5201
A8	C6	295374		CAPAC: 3-10PF	91293	5201
A8	C7	295374		CAPAC: 3-10PF	91293	5201
A8	FL1	293609		FILTER CONNECTOR	72982	1201-082
A8	J1	299234	6	CONNECTORIRT ANGLE BULKHEAD	98291	51-047-0000
A8	J2	299233		CONNECTORIST BULKHEAD	98291	51-045-0000
A8A1		298955		PWB ASSY, 361-370 INPUT	00752	298955
A8A1	C1	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A8A1	C2	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A1	C3	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A1	C4	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A1	C5	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A8A1	C6	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A1	E2	293310		TERMINAL SOLDER	71279	1597-2-01
A8A1	L2	299237-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A8A1	Q1	299239-001		TRANSISTORINPN SI	04713	2N5179
A8A1	R1	299701-180		RESISTORIFXD CAR 18 OHM ~+5% 1/4W	01121	RC07GF180J
A8A1	R2	299701-161	7	RESISTORIFXD CAR 160 OHM ~+5% 1/4W	01121	RC07GF161J
A8A1	R3	299701-622		RESISTORIFXD CAR 6.2K ~+5% 1/4	01121	RC07GF622J
A8A1	R4	299701-622		RESISTORIFXD CAF 6.2K ~+5% 1/4	01121	RC07GF622J
A8A1	R5	299701-102		RESISTORIFXD CAR 1K ~+5% 1/4W	01121	RC07GF102J
A8A1	R6	299701-180		RESISTORIFXD CAR 18 OHM ~+5% 1/4W	01121	RC07GF180J
A8A2		298956		PWB ASSY, 361-370 OUTPUT	00752	298956
A8A2	C1	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A2	C2	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A2	C3	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A2	C4	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A8A2	C5	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A2	C6	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A2	C7	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A8A2	C8	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A2	C9	299241-080	11	CAPIFXD DIP MICA 8PF ~+0.5PF 300WVDC	72136	DM5-080D
A8A2	C10	299241-100	6	CAPIFXD DIP MICA 10PF ~+0.5PF 300WVDC	72136	DM5-100J
A8A2	C11	299240-001		CAPIFXD DIP TA 6.8UF ~+20% 35WVDC	05397	T368B685M035AS
A8A2	C12	299243-001		CAPIFXD CER DISC .001UF ~+20% 1000WVDC	56289	CK60AW102M
A8A2	E2	293310		TERMINAL SOLDER	71279	1597-2-01
A8A2	L1	299237-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A8A2	L2	299237-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A8A2 L5	298899-002	6	INDUCTORIFXD .08UH	00752	298899-002
A8A2 L6	298899-002		INDUCTORIFXD .08UH	00752	298899-002
A8A2 L9	298899-002		INDUCTORIFXD .08UH	00752	298899-002
A8A2 L6	299287-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A8A2 L7	299287-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A8A2 Q1	299289-001		TRANSISTORINPN SI	04713	2N5179
A8A2 Q2	299289-001		TRANSISTORINPN SI	04713	2N5179
A8A2 R1	299701-180		RESISTORIFXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A8A2 R2	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A8A2 R3	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A8A2 R4	299701-242	2	RESISTORIFXD CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A8A2 R5	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A8A2 R6	299701-622		RESISTORIFXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A8A2 R7	299701-362		RESISTORIFXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A8A2 R8	299701-180		RESISTORIFXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A8A2 R9	299701-301		RESISTORIFXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A9	298959		ASST, 830-881 MHZ FILTER AMP	00752	298959
A9 C1	295374		CAPAC 3-10PF	72982	5201
A9 C2	295374		CAPAC 3-10PF	72982	5201
A9 C3	295374		CAPAC 3-10PF	72982	5201
A9 C4	295374		CAPAC 3-10PF	72982	5201
A9 C5	295374		CAPAC 3-10PF	72982	5201
A9 FL1	293609		FILTER CONNECTOR	72982	1201-082
A9 J1	299283		CONNECTORIST BULKHEAD	98291	51-045-0000
A9 J2	299283		CONNECTORIST BULKHEAD	98291	51-045-0000
A9A1	298965		PWB ASST, 830-881 FILT/AMP INPUT	00752	298965
A9A1 C1	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A9A1 C2	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A1 C3	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A1 C4	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A1 C5	299248-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A1 C6	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A9A1 E2	293306		TERMINALIDISCONNECT	71279	1019-2-901
A9A1 L1	299287-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A9A1 L2	299287-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A9A1 R1	299701-822		RESISTORIFXD CAR 8.2K +-5% 1/4W	01121	RC07GF822J
A9A1 R2	299701-822		RESISTORIFXD CAR 8.2K +-5% 1/4W	01121	RC07GF822J
A9A1 R3	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A9A1 R4	299701-180		RESISTORIFXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A9A2	298966		PWB ASST, 830-881 FILT/AMP OUTPUT	00752	298966
A9A2 C1	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A2 C2	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A9A2 C3	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A2 C4	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A2 C5	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A2 C6	299248-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A2 C7	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A9A2 C8	299240-001		CAPIFXD DIP TA 6.8 F +-20% 35WVDC	05397	T36A686M035AS
A9A2 C9	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A2 C10	299243-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A9A2 E2	293306		TERMINALIDISCONNECT	71279	1019-2-901
A9A2 L1	299287-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A9A2 L2	299287-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A9A2 L3	299287-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A9A2 L4	299287-012		INDUCTORIFXD MOLDED .47UH	99800	1025-012
A9A2 Q1	299289-001		TRANSISTORINPN SI	04713	2N5179
A9A2 Q2	299289-001		TRANSISTORINPN SI	04713	2N5179
A9A2 R1	299701-180		RESISTORIFXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A9A2 R2	299701-822		RESISTORIFXD CAR 8.2K +-5% 1/4W	01121	RC07GF822J
A9A2 R3	299701-822		RESISTORIFXD CAR 8.2K +-5% 1/4W	01121	RC07GF822J
A9A2 R4	299701-152		RESISTORIFXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A9A2 R5	299701-822		RESISTORIFXD CAR 8.2K +-5% 1/4W	01121	RC07GF822J
A9A2 R6	299701-822		RESISTORIFXD CAR 8.2K +-5% 1/4W	01121	RC07GF822J
A9A2 R7	299701-102		RESISTORIFXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A10	298937		ASST, HIGH FREQ SECTION	00752	298937
A10 FL1	293609		FILTER CONNECTOR	72982	1201-082
A10 FL2	293609		FILTER CONNECTOR	72982	1201-082
A10 FL3	293609		FILTER CONNECTOR	72982	1201-082
A10 FL4	293609		FILTER CONNECTOR	72982	1201-082
A10 FL5	293609		FILTER CONNECTOR	72982	1201-082
A10 FL7	293609		FILTER CONNECTOR	72982	1201-082
A10 FL8	293609		FILTER CONNECTOR	72982	1201-082
A10 FL9	293609		FILTER CONNECTOR	72982	1201-082
A10 FL10	293609		FILTER CONNECTOR	72982	1201-082
A10 J1	299283		CONNECTORIST BULKHEAD	98291	51-045-0000
A10 J2	299284		CONNECTORIRT ANGLE BULKHEAD	98291	51-047-0000
A10 J3	299284		CONNECTORIRT ANGLE BULKHEAD	98291	51-047-0000
A10 J4	299284		CONNECTORIRT ANGLE BULKHEAD	98291	51-047-0000
A10 J5	299284		CONNECTORIRT ANGLE BULKHEAD	98291	51-047-0000
A10 J6	299284		CONNECTORIRT ANGLE BULKHEAD	98291	51-047-0000
A10A1	298955		PWB ASST, 837 OSC/ISOL	00752	298955
A10A1 C1	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A1 C2	299241-360		CAPIFXD DIP MICA 36PF +-5% 300WVDC	72136	DM5-360J
A10A1 C3	299241-101	1	CAPIFXD DIP MICA 100PF +-5% 300WVDC	72136	DM5-101J
A10A1 C4	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C5	299241-050	7	CAPIFXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-050D
A10A1 C6	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C7	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C8	299241-120	2	CAPIFXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A10A1 C9	299248-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C10	299248-001		CAPIFXL CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C11	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A1 C12	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C13	299248-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C14	299243-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C15	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A1 C16	299241-430		CAPIFXD DIP MICA 43PF +-5% 300WVDC	72136	DM5-430J
A10A1 C17	299248-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C18	299241-080		CAPIFXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A1 C19	299241-080		CAPIFXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A1 C20	299241-080		CAPIFXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A1 C21	299248-001		CAPIFXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A10A1 C22	293746		CAP:VAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A1 C23	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C24	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C25	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C26	293746		CAP:VAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A1 C27	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C28	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C29	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C30	293746		CAP:VAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A1 C31	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C32	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C33	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A1 C34	293746		CAP:VAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A1 C35	299241-080		CAP:FXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A1 C36	299241-080		CAP:FXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A1 C37	299241-080		CAP:FXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A1 C38	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-050D
A10A1 C39	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-050D
A10A1 C40	299241-080		CAP:FXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A1 C41	299241-100		CAP:FXD DIP MICA 10PF +-0.5PF 300WVDC	72136	DM5-100J
A10A1 C42	299241-080		CAP:FXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A1 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A10A1 E3	293310		TERMINAL SOLDER	71279	1597-2-01
A10A1 E4	293310		TERMINAL SOLDER	71279	1597-2-01
A10A1 L1	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A1 L2	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A1 L3	299257-001	1	INDUCTOR:FXD .183UH	00782	299257-001
A10A1 L4	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A1 L6	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A1 L7	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A1 L8	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A1 L9	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A1 L10	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A1 L23	299257-008	1	INDUCTOR:FXD MOLDED .38UH	99800	1025-08
A10A1 Q1	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 Q2	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 Q3	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 Q4	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 Q5	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 Q5	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 Q6	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 Q7	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 Q8	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A1 R1	299701-622		RESISTOR:FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A10A1 R2	299701-362		RESISTOR:FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A10A1 R3	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A10A1 R4	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R5	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R6	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A10A1 R7	299701-102		RESISTOR:FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A10A1 R8	299701-821	1	RESISTOR:FXD CAR 820 OHM +-5% 1/4W	01121	RC07GF821J
A10A1 R9	299701-180		RESISTOR:FXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A10A1 R10	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R11	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R12	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A10A1 R14	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A10A1 R15	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A10A1 R16	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R17	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R18	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A10A1 R20	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A10A1 R21	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A10A1 R22	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R23	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R24	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A10A1 R26	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A10A1 R27	299701-470		RESISTOR:FXD CAR 47 OHM +-5% 1/4W	01121	RC07GF470J
A10A1 R28	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R29	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R30	299701-471		RESISTOR:FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A10A1 R31	299701-180		RESISTOR:FXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A10A1 R32	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R33	299701-472		RESISTOR:FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A1 R34	299701-152		RESISTOR:FXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A10A1 Y1	298815	1	CRYSTAL:1112,333 MHZ	00752	298315
A10A2	298996		PWB ASSY, 337 ISOL	00752	298996
A10A2 C1	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C2	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C4	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-050D
A10A2 C5	293910		CAP:VAR TRMR CER 2-8PF	72982	538-037-A-2-8
A10A2 C6	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C7	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C8	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C9	293910		CAP:VAR TRMR CER 2-8PF	72982	538-037-A-2-8
A10A2 C10	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-050D
A10A2 C11	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C12	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C13	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C14	299241-080		CAP:FXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A2 C15	293910		CAP:VAR TRMR CER 2-8PF	72982	538-037-A-2-8
A10A2 C16	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C17	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C18	299243-001		CAP:FXD CER DISC .001UF +-20% 1000WVDC	56289	CK60AW102M
A10A2 C19	299241-120		CAP:FXD DIP MICA 12PF +-5% 300WVDC	72136	DM5-120J
A10A2 C20	293910		CAP:VAR TRMR CER 2-8PF	72982	538-037-A-2-8
A10A2 C21	299240-001		CAP:FXD DIP TA 6.8UF +-20% 35WVDC	05397	T368B685M035AS
A10A2 C22	299245-002	11	CAP:FXD CER .01UF +-20% 50WVDC	72982	8121-R050-651-103M
A10A2 C23	299241-080		CAP:FXD DIP MICA 8PF +-0.5PF 300WVDC	72136	DM5-080D
A10A2 C24	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-050D
A10A2 C25	299241-050		CAP:FXD DIP MICA 5PF +-0.5PF 300WVDC	72136	DM5-050D
A10A2 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A10A2 E2	293310		TERMINAL SOLDER	71279	1597-2-01
A10A2 E5	293310		TERMINAL SOLDER	71279	1597-2-01
A10A2 L1	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A2 L2	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A2 L3	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A2 L4	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A2 L5	299237-012		INDUCTOR:FXD MOLDED .47UH	99800	1025-012
A10A2 M1	231104-001	2	MIXER	15942	SRA-1
A10A2 Q1	299239-001		TRANSISTOR:NPN SI	04713	2N5179
A10A2 Q2	299239-001		TRANSISTOR:NPN SI	04713	2N5179

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A10A2 Q3	299239-001		TRANSISTORINPN SI	04713	2N5179
A10A2 Q4	299239-001		TRANSISTORINPN SI	04713	2N5179
A10A2 R1	299701-470		RESISTORIFXD CAR 47 OHM ~~5% 1/4W	01121	RC07GF470J
A10A2 R2	299701-470		RESISTORIFXD CAR 47 OHM ~~5% 1/4W	01121	RC07GF470J
A10A2 R3	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF472J
A10A2 R4	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF472J
A10A2 R5	299701-102		RESISTORIFXD CAR 1K ~~5% 1/4W	01121	RC07GF472J
A10A2 R6	299701-472		RESISTORIFXD CAR 47 OHM ~~5% 1/4W	01121	RC07GF102J
A10A2 R7	299701-470		RESISTORIFXD CAR 47 OHM ~~5% 1/4W	01121	RC07GF470J
A10A2 R8	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF470J
A10A2 R9	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF472J
A10A2 R10	299701-102		RESISTORIFXD CAR 1K ~~5% 1/4W	01121	RC07GF472J
A10A2 R11	299701-470		RESISTORIFXD CAR 47 OHM ~~5% 1/4W	01121	RC07GF102J
A10A2 R12	299701-470		RESISTORIFXD CAR 47 OHM ~~5% 1/4W	01121	RC07GF470J
A10A2 R13	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF470J
A10A2 R14	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF472J
A10A2 R15	299701-102		RESISTORIFXD CAR 1K ~~5% 1/4W	01121	RC07GF472J
A10A2 R16	299701-680		RESISTORIFXD CAR 68 OHM ~~5% 1/4W	01121	RC07GF102J
A10A2 R17	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF680J
A10A2 R18	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF472J
A10A2 R19	299701-102		RESISTORIFXD CAR 1.0K ~~5% 1/4W	01121	RC07GF472J
A10A2	298880		SOCKETIPIN	00779	RC07GF152J
					1-331677-8
A10A3	298921		PWB ASSY, 30-90 MHZ BPF	00752	298901
A10A3 C1	299200-001	6	CAPIFXD DIP MICA 300PF ~~5% 300WVDC	14655	CM04FC301J03
A10A3 C2	299200-001		CAPIFXD DIP MICA 300PF ~~5% 300WVDC	14655	CM04FC301J03
A10A3 C3	299201-100		CAPIFXD DIP MICA 12PF ~~0.5PF 300WVDC	72136	DM5-100J
A10A3 C4	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C5	299204-151	8	CAPIFXD DIP MICA 150PF ~~5% 500WVDC	14655	CM04FD151J03
A10A3 C6	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C7	299204-151		CAPIFXD DIP MICA 150PF ~~5% 500WVDC	14655	CM04FD151J03
A10A3 C8	299201-120		CAPIFXD DIP MICA 12PF ~~0.5PF 300WVDC	72136	DM5-100J
A10A3 C9	299201-301		CAPIFXD DIP MICA 300PF ~~5% 300WVDC	14655	CM04FC301J03
A10A3 C10	299201-301		CAPIFXD DIP MICA 300PF ~~5% 300WVDC	14655	CM04FC301J03
A10A3 C11	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C12	299201-301		CAPIFXD DIP MICA 300PF ~~5% 300WVDC	14655	CM04FC301J03
A10A3 C13	299201-301		CAPIFXD DIP MICA 300PF ~~5% 300WVDC	14655	CM04FC301J03
A10A3 C14	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C15	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C16	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C17	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C18	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C19	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 C20	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A3 L1	281180-001		INDUCTORIVAR .138UH	00752	231105-001
A10A3 L2	281180-005	2	INDUCTORIVAR .44UH	00752	231105-005
A10A3 L3	281180-001		INDUCTORIVAR .138UH	00752	231105-001
A10A3 L4	281180-005		INDUCTORIVAR .44UH	00752	231105-005
A10A3 L5	281180-001		INDUCTORIVAR .138UH	00752	231105-001
A10A3 L6	281180-001		INDUCTORIVAR .138UH	00752	231105-001
A10A3 L7	299237-048		INDUCTORIFXD MOLDED 18UH	99800	1025-048
A10A3 Q1	299174		TRANSISTORINPN SI	04713	MPS918
A10A3 R1	299701-180		RESISTORIFXD CAR 180 OHM ~~5% 1/4W	01121	RC07GF181J
A10A3 R2	299701-472		RESISTORIFXD CAR 4.7K ~~5% 1/4W	01121	RC07GF472J
A10A3 R3	299701-102		RESISTORIFXD CAR 1K ~~5% 1/4W	01121	RC07GF102J
A10A3 R4	299701-181		RESISTORIFXD CAR 180 OHM ~~5% 1/4W	01121	RC07GF181J
A10A3 R5	299701-181		RESISTORIFXD CAR 180 OHM ~~5% 1/4W	01121	RC07GF181J
A10A4	299900		PWB ASSY, 330.0 MHZ POWER AMP	00752	298902
A10A4 C1	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A4 C3	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A4 C4	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A4 C5	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A4 C6	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A4 C7	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A4 C8	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A4 C9	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A4 C10	293796		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A4 C11	299201-100		CAPIFXD DIP MICA 10PF ~~0.5PF 300WVDC	72136	DM5-100J
A10A4 C12	299201-100		CAPIFXD DIP MICA 10PF ~~0.5PF 300WVDC	72136	DM5-100J
A10A4 C13	299201-360		CAPIFXD DIP MICA 36PF ~~5% 300WVDC	72136	DM5-360J
A10A4 C14	293746		CAPIVAR TRMR CER 2-8PF	72982	538-011-A-2-8
A10A4 C15	299241-360		CAPIFXD DIP MICA 36PF ~~5% 300WVDC	72136	DM5-360J
A10A4 C16	299260-001		CAPIFXD DIP TA 6.8UF ~~20% 35WVDC	05397	T368B685M035AS
A10A4 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A10A4 L2	299237-012		INDUCTORIFXD MOLDED .97UH	99800	1025-012
A10A4 L6	298899-002		INDUCTORIFXD .04UH	00752	298899-002
A10A4 L5	298899-002		INDUCTORIFXD .04UH	00752	298899-002
A10A4 L6	298899-002		INDUCTORIFXD .04UH	00752	298899-002
A10A4 L7	299237-012		INDUCTORIFXD MOLDED .97UH	99800	1025-012
A10A4 M1	281104-003	1	MIXER	15542	SRA-1WH
A10A4 Q1	299239-001		TRANSISTORINPN SI	04713	2N5179
A10A4 Q2	294147	2	TRANSISTORINPN SI	04713	2N3866
A10A4 Q3	294147		TRANSISTORINPN SI	04713	2N3866
A10A4 R1	299701-180		RESISTORIFXD CAR 18 OHM ~~5% 1/4W	01121	RC07GF180J
A10A4 R2	299701-622		RESISTORIFXD CAR 6.2K ~~5% 1/4	01121	RC07GF622J
A10A4 R3	299701-622		RESISTORIFXD CAR 6.2K ~~5% 1/4	01121	RC07GF622J
A10A4 R4	299701-681	3	RESISTORIFXD CAR 680 OHM ~~5% 1/4W	01121	RC07GF681J
A10A4 R5	299701-301		RESISTORIFXD CAR 300 OHM ~~5% 1/4W	01121	RC07GF301J
A10A4 R6	299701-102		RESISTORIFXD CAR 1K ~~5% 1/4W	01121	RC07GF102J
A10A4 R7	299701-201		RESISTORIFXD CAR 200 OHM ~~5% 1/4W	01121	RC07GF201J
A10A4 R8	299701-102		RESISTORIFXD CAR 1K ~~5% 1/4W	01121	RC07GF102J
A10A4 R9	299701-301		RESISTORIFXD CAR 300 OHM ~~5% 1/4W	01121	RC07GF301J
A10A4 R10	299701-161		RESISTORIFXD CAR 160 OHM ~~5% 1/4W	01121	RC07GF161J
A10A4 R11	299701-470		RESISTORIFXD CAR 47 OHM ~~5% 1/4W	01121	RC07GF470J
A10A4 R16	299701-161		RESISTORIFXD CAR 160 OHM ~~5% 1/4W	01121	RC07GF161J
A10A4 R17	299701-161		RESISTORIFXD CAR 160 OHM ~~5% 1/4W	01121	RC07GF161J
A10A4	298880		SOCKETIPIN	00779	1-331677-8
A10A4	293999		TRANSIPAD	07047	10105-OAP
A10A4	293998		TRANSIPAD	07047	10028-OAP
A10A5	298900		PWB ASSY, 1-8 MHZ CORR GENERATOR	00752	298900
A10A5 C1	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C2	299260-002	1	CAPIFXD DIP TA 22UF ~~20% 15WVDC	05397	T368B226M015AS
A10A5 C3	299260-001		CAPIFXD DIP TA 6.8UF ~~20% 35WVDC	05397	T368B685M035AS
A10A5 C4	299245-001	4	CAPIFXD CER .1UF ~~20% 50WVDC	72982	8121-M050-W5R0-104M
A10A5 C5	299245-002		CAPIFXD CER .01UF ~~20% 50WVDC	72982	8121-M050-651-103M
A10A5 C6	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C7	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C8	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C9	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C10	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C11	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C12	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C13	299243-001		CAPIFXD CER DISC .001UF ~~20% 1000WVDC	56289	CK60AW102M
A10A5 C17	299245-002		CAPIFXD CER .01UF ~~20% 50WVDC	72982	8121-M050-651-103M
A10A5 C18	299245-002		CAPIFXD CER .01UF ~~20% 50WVDC	72982	8121-M050-651-103M
A10A5 C19	299250-132	2	CAPIFXD DIP MICA 1300PF ~~5% 500WVDC	14655	CM06FD132J03
A10A5 C20	299250-432	1	CAPIFXD DIP MICA 4300PF ~~5% 500WVDC	14655	CM06FD432J03

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A10A5 C21	299250-132		CAPACITOR,FXD,DIP,MICA,1300PF,+-5%,500WVDC	14655	CM06FD132J03
A10A5 C22	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A5 C23	299250-471		CAPACITOR,FXD,DIP,MICA,470PF,+-5%,500WVDC	14655	CM06FD471J03
A10A5 C24	299250-162	1	CAPACITOR,FXD,DIP,MICA,1600PF,+-5%,500WVDC	14655	CM06FD162J03
A10A5 C25	299250-471		CAPACITOR,FXD,DIP,MICA,470PF,+-5%,500WVDC	14655	CM06FD471J03
A10A5 C26	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A5 C27	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A5 C28	299250-301		CAPACITOR,FXD,DIP,MICA,300PF,+-5%,300WVDC	14655	CM04FC301J03
A10A5 C29	299250-102	2	CAPACITOR,FXD,DIP,MICA,1000PF,+-5%,500WVDC	14655	CM06FD102J03
A10A5 C30	299250-301		CAPACITOR,FXD,DIP,MICA,300PF,+-5%,300WVDC	14655	CM04FC301J03
A10A5 C31	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A5 C32	299250-301		CAPACITOR,FXD,DIP,MICA,300PF,+-5%,300WVDC	14655	CM04FC301J03
A10A5 C33	299250-102		CAPACITOR,FXD,DIP,MICA,1000PF,+-5%,500WVDC	14655	CM06FD102J03
A10A5 C34	299250-301		CAPACITOR,FXD,DIP,MICA,300PF,+-5%,300WVDC	14655	CM04FC301J03
A10A5 C35	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A5 E1	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A10A5 E2	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A10A5 E3	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A10A5 E4	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A10A5 E5	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A10A5 E6	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A10A5 E7	293306		TERMINAL,DISCONNECT	71279	1019-2-901
A10A5 J1	299235-001	3	CONNECTOR,RT ANGLE PC BD	98291	81-353-0008
A10A5 L1	299237-042		INDUCTOR,FXD,MOLDED 8.2UH	99800	1025-042
A10A5 L2	299237-042		INDUCTOR,FXD,MOLDED 8.2UH	99800	1025-042
A10A5 L3	299237-042		INDUCTOR,FXD,MOLDED 8.2UH	99800	1025-042
A10A5 L4	299237-042		INDUCTOR,FXD,MOLDED 8.2UH	99800	1025-042
A10A5 L5	299237-032	3	INDUCTOR,FXD,MOLDED 3.3UH	99800	1025-032
A10A5 L6	299237-042		INDUCTOR,FXD,MOLDED 8.2UH	99800	1025-042
A10A5 L7	299237-046		INDUCTOR,FXD,MOLDED 15UH	99800	1025-048
A10A5 L8	299237-042		INDUCTOR,FXD,MOLDED 8.2UH	99800	1025-042
A10A5 L9	299237-042		INDUCTOR,FXD,MOLDED 8.2UH	99800	1025-042
A10A5 L10	299237-032		INDUCTOR,FXD,MOLDED 3.3UH	99800	1025-032
A10A5 L11	299237-032		INDUCTOR,FXD,MOLDED 3.3UH	99800	1025-032
A10A5 L12	299237-028		INDUCTOR,FXD,MOLDED 2.2UH	99800	1025-028
A10A5 L13	299237-028		INDUCTOR,FXD,MOLDED 2.2UH	99800	1025-028
A10A5 L14	299237-028		INDUCTOR,FXD,MOLDED 2.2UH	99800	1025-028
A10A5 L15	299237-042		INDUCTOR,FXD,MOLDED 8.2UH	99800	1025-042
A10A5 L17	299237-048		INDUCTOR,FXD,MOLDED 15UH	99800	1025-048
A10A5 Q1	294172		TRANSISTOR,NPN SI	04713	MPS918
A10A5 Q2	299255		TRANSISTOR,PNP SI	04713	2N4126
A10A5 Q3	299255		TRANSISTOR,PNP SI	04713	2N4126
A10A5 Q4	299255		TRANSISTOR,PNP SI	04713	2N4126
A10A5 Q5	294173	5	TRANSISTOR,FET	98571	U1897E
A10A5 Q6	294173		TRANSISTOR,FET	98571	U1897F
A10A5 Q7	294173		TRANSISTOR,FET	98571	U1697E
A10A5 Q8	299255		TRANSISTOR,PNP SI	04713	2N4126
A10A5 R1	299701-362		RESISTOR,FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A10A5 R2	299701-242		RESISTOR,FXD CAR 2.4K +-5% 1/4W	01121	RC07GF242J
A10A5 R3	299701-471		RESISTOR,FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A10A5 R4	299701-301		RESISTOR,FXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A10A5 R5	299701-472		RESISTOR,FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A5 R6	299701-471		RESISTOR,FXD CAR 470 OHM +-5% 1/4W	01121	RC07GF471J
A10A5 R7	299701-201		RESISTOR,FXD CAR 200 OHM +-5% 1/4W	01121	RC07GF201J
A10A5 R8	299701-201		RESISTOR,FXD CAR 200 OHM +-5% 1/4W	01121	RC07GF201J
A10A5 R9	299701-201		RESISTOR,FXD CAR 200 OHM +-5% 1/4W	01121	RC07GF201J
A10A5 R10	299701-680		RESISTOR,FXD CAR 68 OHM +-5% 1/4W	01121	RC07GF680J
A10A5 R11	299701-680		RESISTOR,FXD CAR 68 OHM +-5% 1/4W	01121	RC07GF680J
A10A5 R12	299701-680		RESISTOR,FXD CAR 68 OHM +-5% 1/4W	01121	RC07GF680J
A10A5 R13	299701-102		RESISTOR,FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A10A5 R14	299701-102		RESISTOR,FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A10A5 R15	299701-102		RESISTOR,FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A10A5 R16	299701-203		RESISTOR,FXD CAR 20K +-5% 1/4W	01121	RC07GF203J
A10A5 R17	299701-203		RESISTOR,FXD CAR 20K +-5% 1/4W	01121	RC07GF203J
A10A5 R18	299701-203		RESISTOR,FXD CAR 20K +-5% 1/4W	01121	RC07GF203J
A10A5 R19	299701-472		RESISTOR,FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A5 R20	299701-472		RESISTOR,FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A5 R21	299701-472		RESISTOR,FXD CAR 4.7K +-5% 1/4W	01121	RC07GF472J
A10A5 R22	299701-180		RESISTOR,FXD CAR 18 OHM +-5% 1/4W	01121	RC07GF180J
A10A5 R23	299701-301		RESISTOR,FXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A10A5 R24	299701-301		RESISTOR,FXD CAR 300 OHM +-5% 1/4W	01121	RC07GF301J
A10A5 R25	299701-152		RESISTOR,FXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A10A5 R26	299701-102		RESISTOR,FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A10A5 R27	299701-102		RESISTOR,FXD CAR 1K +-5% 1/4W	01121	RC07GF102J
A10A5 R28	299701-152		RESISTOR,FXD CAR 1.5K +-5% 1/4W	01121	RC07GF152J
A10A5 U1	293525	1	IC,TTL BINARY COUNTER	72314	93516DM
A10A5 U2	293350		IC,TTL DUAL J-K FF	01295	SN74S113N
A10A5 U3	293350		IC,TTL DUAL J-K FF	01295	SN74S113N
A10A5 U4	293350		IC,TTL DUAL J-K FF	01295	SN74S113N
A10A5 U5	293366	1	IC,TTL QUAD 2 INPUT NAND GATES	01295	SN7400N
A10A5 U6	293362	2	IC,TTL QUAD 2 INPUT NOR GATES	01295	SN7402N
A10A5 U7	293362		IC,TTL QUAD 2 INPUT NOR GATES	01295	SN7402N
A10A5 U8	293366	1	IC,TTL HEX INVERTER	01295	SN74S04N
A10A5 U9	293361	1	IC,TTL QUAD 2 INPUT NAND GATES	01295	SN7408N
A10A6	298903		PWB ASSY, 29 MHZ CONVERTER	00752	298903
A10A6 C1	299250-391		CAPACITOR,FXD,DIP,MICA,390PF,+-5%,100WVDC	14655	CM04FA391J03
A10A6 C2	299241-820	2	CAPACITOR,FXD,DIP,MICA,82PF,+-5%,300WVDC	72136	DM5-820J
A10A6 C3	299241-820		CAPACITOR,FXD,DIP,MICA,82PF,+-5%,300WVDC	72136	DM5-820J
A10A6 C4	299250-391		CAPACITOR,FXD,DIP,MICA,390PF,+-5%,100WVDC	14655	CM04FA391J03
A10A6 C6	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A6 C7	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A6 C8	299241-680	14	CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C10	299241-030	4	CAPACITOR,FXD,DIP,MICA,3PF,+-0.5PF,300WVDC	72136	DM5-030D
A10A6 C11	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C12	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C13	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C14	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C15	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C16	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C17	299241-020	6	CAPACITOR,FXD,DIP,MICA,2PF,+-0.5PF,300WVDC	72136	DM5-020D
A10A6 C18	299241-020		CAPACITOR,FXD,DIP,MICA,2PF,+-0.5PF,300WVDC	72136	DM5-020D
A10A6 C19	299241-020		CAPACITOR,FXD,DIP,MICA,2PF,+-0.5PF,300WVDC	72136	DM5-020D
A10A6 C20	299241-030		CAPACITOR,FXD,DIP,MICA,3PF,+-0.5PF,300WVDC	72136	DM5-030D
A10A6 C21	299241-750	2	CAPACITOR,FXD,DIP,MICA,75PF,+-5%,300WVDC	72136	DM5-750J
A10A6 C22	299250-471		CAPACITOR,FXD,DIP,MICA,470PF,+-5%,500WVDC	14655	CM06FD471J03
A10A6 C24	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A6 C25	299245-002		CAPACITOR,FXD,CER,.01UF,+-20%,50WVDC	72982	8121-M058-651-103M
A10A6 C26	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C28	299241-030		CAPACITOR,FXD,DIP,MICA,3PF,+-0.5PF,300WVDC	72136	DM5-030D
A10A6 C29	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J
A10A6 C30	299241-680		CAPACITOR,FXD,DIP,MICA,68PF,+-5%,300WVDC	72136	DM5-680J

Reference Designation	AILTECH Part Number	Qty	Description	Mfr Code	Mfr Part Number
A10A6 C31	299241-680		CAPACITOR DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A10A6 C32	299241-680		CAPACITOR DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A10A6 C33	299241-680		CAPACITOR DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A10A6 C34	299241-680		CAPACITOR DIP MICA 68PF +-5% 300WVDC	72136	DM5-680J
A10A6 C36	299241-020		CAPACITOR DIP MICA 2PF +-0.5PF 300WVDC	72136	DM5-020D
A10A6 C37	299241-020		CAPACITOR DIP MICA 2PF +-0.5PF 300WVDC	72136	DM5-020D
A10A6 C38	299241-020		CAPACITOR DIP MICA 2PF +-0.5PF 300WVDC	72136	DM5-020D
A10A6 C39	299241-030		CAPACITOR DIP MICA 3PF +-0.5PF 300WVDC	72136	DM5-030D
A10A6 C40	299241-750		CAPACITOR DIP MICA 75PF +-5% 300WVDC	72136	DM5-750J
A10A6 C41	299250-471		CAPACITOR DIP MICA 470PF +-5% 500WVDC	14655	CM06FD471J03
A10A6 C42	299243-002		CAPACITOR CER .01UF +-20% 50WVDC	72982	8121-P05A-651-103M
A10A6 C43	299240-001		CAPACITOR DIP TA 6.8UF +-20% 35WVDC	05397	T368B685M035AS
A10A6 E1	293310		TERMINAL SOLDER	71279	1597-2-01
A10A6 J10	299235-001		CONNECTOR,RT ANGLE PC BD	98291	51-353-0000
A10A6 J11	299236-001		CONNECTOR,RT ANGLE PC BD	98291	51-353-0000
A10A6 L1	299237-044	1	INDUCTOR,FXD MOLDED 10.0UH	99800	1025-044
A10A6 L2	231105-003	18	INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L3	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L5	299237-048		INDUCTOR,FXD MOLDED 15UH	99800	1025-048
A10A6 L6	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L7	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L8	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L9	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L10	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L11	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L12	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L13	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L14	299237-048		INDUCTOR,FXD MOLDED 15UH	99800	1025-048
A10A6 L15	299237-048		INDUCTOR,FXD MOLDED 15UH	99800	1025-048
A10A6 L17	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L18	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L19	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L20	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L21	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L22	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L23	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L24	231105-003		INDUCTOR,VAR .44UH	00752	231105-003
A10A6 L26	299237-048		INDUCTOR,FXD MOLDED 15UH	99800	1025-048
A10A6 L27	299237-048		INDUCTOR,FXD MOLDED 15UH	99800	1025-048
A10A6 L28	299237-048		INDUCTOR,FXD MOLDED 15UH	99800	1025-048
A10A6 L29	299237-048		INDUCTOR,FXD MOLDED 15UH	99800	1025-048
A10A6 L30	299237-012		INDUCTOR,FXD MOLDED .47UH	99800	1025-012
A10A6 L31	299237-012		INDUCTOR,FXD MOLDED .47UH	99800	1025-012
A10A6 M1	231104-001		MIXER	15542	SRA-1
A10A6 Q1	294151	2	TRANSISTOR,NPN SI	04713	2N4124
A10A6 Q2	294151		TRANSISTOR,NPN SI	04713	2N4124
A10A6 R1	299701-362		RESISTOR,FXD CAR 3.6K +-5% 1/4W	01121	RC07GF362J
A10A6 R2	299701-622		RESISTOR,FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A10A6 R3	299701-622		RESISTOR,FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A10A6 R4	299701-681		RESISTOR,FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A10A6 R5	299701-622		RESISTOR,FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A10A6 R7	299701-622		RESISTOR,FXD CAR 6.2K +-5% 1/4	01121	RC07GF622J
A10A6 R8	299701-681		RESISTOR,FXD CAR 680 OHM +-5% 1/4W	01121	RC07GF681J
A10A6 R9	299701-362		RESISTOR,FXD CAP 3.6K +-5% 1/4W	01121	RC07GF362J

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